

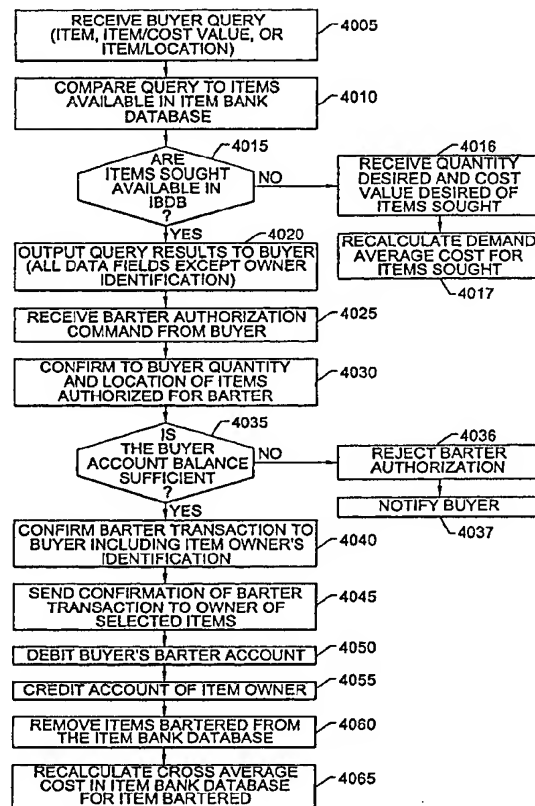


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<b>(21) International Application Number:</b> PCT/US00/12101 <b>(22) International Filing Date:</b> 5 May 2000 (05.05.00) <b>(30) Priority Data:</b> 60/132,779                      6 May 1999 (06.05.99)                      US <b>(71)(72) Applicant and Inventor:</b> ROBERTSON, Virginia [US/US]; 78 Worthington Dr., Black Creek, GA 31308 (US). <b>(74) Agents:</b> TOBIN, Michael, A. et al.; Kennedy Covington Lobdell & Hickman, L.L.P., Suite 4200, Bank of America Corporate Center, 100 N. Tryon St., Charlotte, NC 28202-4006 (US).		<b>(81) Designated States:</b> AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SI, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>Without international search report and to be republished upon receipt of that report.</i>

**(54) Title:** ITEM BANK ENGINE FOR CONDUCTING BARTER TRANSACTIONS OVER A COMPUTER NETWORK**(57) Abstract**

A computerized barter transaction system characterized by use of an Item Bank Database containing a standardized name for goods and services typically sold in a particular industry organized within a multilevel organizational scheme. Data fields including location, owner, quantity, cost value, desired cost value, quality, desired quantity facilitate calculation of cross average cost and demand average cost associated with each standardized item name for a particular industry, as well as a conversion rate between barter credits and other currency. EDI formats including X12 and XML may be used to input data into the Item Bank Database. A method of conducting barter transactions comprising the steps of maintaining a database of items sold in the industry, assigning standardized item names, establishing barter credit accounts, storing owner, quantity, location, and cost value data for each item available for barter in data fields associated with each respective standardized item name, receiving a barter transaction authorization from the buyer and adjusting the barter credit accounts of the owner and buyer. A computer-readable medium for conducting barter transactions.



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ITEM BANK ENGINE FOR CONDUCTING BARTER  
TRANSACTIONS OVER A COMPUTER NETWORK

5 CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. § 119 of U.S. Provisional  
Application No. 60/132,779 filed May 6, 1999.

10 BACKGROUND OF THE INVENTION

1. Technical Field.

The present invention relates generally to computer system networks and more  
particularly to a system and method for using computer networks to conduct barter  
transactions between a plurality of system users.

15

2. Background Information.

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Inefficient distribution of goods to retailers and wholesalers is a significant problem in  
many industries. When too many goods are distributed to retailers or wholesalers in  
geographic markets having insufficient market demand for the goods, excess inventory  
results. Excess inventory or “dead stock” is a problem for wholesalers and retailers not only  
because they are out money spent to acquire the goods, but also because inventory that is  
bought and sold or “turned over” at less than the industry average turnover rate represents  
lost opportunities to make a profit on the repeated sale of the goods, and lost opportunities to  
have used the money spent acquiring the dead stock on acquiring other goods that are in  
demand and that turnover at or above the industry average turnover rate.

25

For example, it is not uncommon in the building materials industry for 10% - 20% of  
a building material supplier's inventory to be dead stock, meaning that items do not turn over  
at or near the industry average turnover rate. This percentage may easily represent 1% of the  
supplier's sales volume. If the industry average turnover rate for this inventory is six times

per year, and if the retailer could make a 20% profit on each sale, then inventory turning over only once per year represents a lost opportunity for the retailer to have made a 20% profit five times.

For excess inventory or dead stock, there is simply nowhere to go in the existing  
5 distribution systems currently prevailing in some industries. Such stock is not in sufficient demand in the geographic market where it is located and it is often not efficient for potential buyers of that dead stock in other geographic markets to obtain information about which remote markets have excess stock. The traditional "dollar" currency does not provide the proper information for the goods, as slow moving or dead stock is traditionally sold for 5¢-  
10 10¢ on the dollar.

A barter transaction involves the exchange of one commodity for another. The commodities involved in such an exchange can either be goods, services, or a combination of both. While the concept of barter transactions is very old indeed, and probably originated before the advent of money, contemporary business-to-business barter transactions often  
15 involve a barter "house" or bank. This bank accounts for and stores "barter dollars" or "trade credits" on behalf of members to facilitate indirect barter exchanges, i.e., exchanges in which a member barter commodities to a second member but receives commodities in exchange from a third member.

The advent of money reduced the use of barter transactions because of the efficiency  
20 involved in sales transactions, i.e. transactions where money is exchange for a commodity. Using money, an individual or organization having a commodity to exchange and needing a different commodity need not search for another person or organization having the desired commodity and requiring the commodity of the first person or organization. Rather, individuals or organizations can exchange one commodity for money and then use the money  
25 to acquire additional commodities.

Nonetheless, the advantages of a currency-based system have not completely eliminated the need for barter transactions because, although currency-based systems add some efficiency, they suffer from such disadvantages as currency inflation and a currency value that reflects advertising and overhead costs of sellers as well as information costs on the part of buyers. Moreover, to acquire goods in a currency-based system, one must obviously have currency. Thus, individuals or organizations having commodities but no currency may lack the ability to acquire additional needed commodities if the currently owned commodities are not marketable in their particular geographic or industry market. Businesses with commodity inventories that exceed the demand for the commodity, for example, may lack sufficient currency to acquire other commodities, having spent their currency in acquiring the excess commodity inventory. Such businesses may advantageously benefit by bartering their excess stock of one commodity to other businesses having excess stock of other commodities rather than discount the sale price of the excess stock below its actual cost.

Barter transactions, therefore, continue to play an important role even in advanced currency-based economic systems. In an effort to make barter transactions more efficient and reduce the search cost entailed in locating a suitable barter partner, businesses have joined together to create barter exchanges. In a typical barter exchange system, individuals or businesses interested in conducting barter transactions register with a barter exchange operator that maintains a central registry of businesses willing to conduct barter transactions. Often, such businesses pay an initial fee to the barter exchange operator to become a member of a particular barter exchange. Many barter exchange operators also charge a transaction fee, which is usually a percentage of the total value of goods bartered, for each barter transaction conducted between barter exchange members.

Contemporary corporate barter is big business. The Corporate Barter Council, Inc. commissioned a study of the barter industry which reported that the corporate barter industry grew to \$9.265 billion in North America in 1998, which was up from \$8.2 billion in 1997. Another report, by the International Reciprocal Trade Association, estimated that \$9.1 billion worth of barter transactions occurred in North America in 1996, with 84% being handled by barter specialists. Indeed, large American companies have been using barter transactions for many years. The president of Atwood Richards, a large multinational trade exchange, estimated that 60% of all consumer manufacturing companies listed on the New York Stock Exchange in the early 1980's were using barter and the president of Business Exchange stated in 1982 that at least half of all large American companies had established internal barter divisions. As might be imagined, many contemporary barter exchange companies are quite large. For example, ITEX Corporation is a publicly traded barter exchange operator that, according to Hoover's Online, had sales of \$31.6 million in 1998.

As illustrated by the discussion above, corporate barter exchange transactions are important and barter exchange operators can grow into large multinational companies. To facilitate barter transactions between barter exchange members, many barter exchange operators utilize "trade credits" or "barter dollars" as an internal currency. Typically, exchange members deposit United States dollars with the barter exchange operator, who then converts the United States dollars one-for-one, usually less a fee, into trade dollars and maintains an account of trade dollars for each exchange member. Alternatively, some barter exchange operators "buy" excess inventory or other non-performing commodities from exchange members at full book value but "pay" for the commodities at least in part by posting corresponding barter dollars to the member's trade account. Barter transactions between exchange members result in corresponding crediting or debiting of the members' trade accounts, less any transaction fees charged by the barter exchange operator.

There are, however, several significant disadvantages associated with current barter exchanges. One significant disadvantage is the difficulty involved in determining whether a specific commodity desired by an exchange member is available for barter from another exchange member. This difficulty results from several factors. First, existing barter exchanges lack a forced organizational scheme for items commonly traded in a particular industry. Current barter exchanges either list members of the exchange by overall industry or list commodities generally sold by barter exchange members in the normal course of their business. For example, a barter exchange may list its members by their generic industry, e.g., restaurants, automobile dealers, airlines, architects or plumbers. Alternatively, existing barter exchanges may receive a list of products and services typically carried by its members and compile all of these products and services into a master listing of commodities possibly available from exchange members. An existing barter exchange may, for example, list advertising, apartments, automobiles, and accounting services under an alphabetical listing beginning with the letter "A" and list other products and services generally carried by exchange members under their corresponding letters.

Using either of these two methods, it is not possible for exchange members desiring a specific commodity to readily determine whether that specific commodity is currently available for barter by another exchange member. Rather, the exchange member desiring a specific item for barter may view the listing of members by industry and determine that another exchange member is generally in an industry corresponding to the commodities desired or view the list of general categories of goods and services possibly available and determine that another exchange member normally deals in commodities such as the ones required. Armed with this information, the exchange member desiring to obtain a specific commodity may then contact the other members listed in the appropriate industry and inquire whether any of those members have the exact item required available for barter at the current

time. If the barter exchange does not allow direct contact between members, or if the exchange merely lists products and services possibly available for barter, then the exchange member desiring to obtain a specific commodity must contact the exchange operator, who then in turn contacts other exchange members and determines whether the desired commodity is currently available.

Another factor contributing to the difficulty in ascertaining whether a specific desired commodity is currently available for barter is the fact that existing exchanges do not require that a given commodity be referred to by a standardized name by all exchange members. It is therefore possible in existing exchanges that two exchange members refer to the identical commodity by a different name. When this occurs, an exchange member desiring to obtain a specific item might not realize that the item is available from another exchange member or, if the member desiring a specific commodity believes that the name used by another exchange member may refer to the desired commodity, then time must be spent confirming that the two exchange members are indeed referring to the same item.

A third factor contributing to the difficulty in ascertaining whether a specific commodity is available for barter is that existing barter exchanges do not typically list or maintain records on items traded in a particular industry that are not currently available for barter from an exchange member. Thus, a member desiring to acquire a specific commodity by barter must either contact the barter exchange operator or other barter exchange members if their contact information is available and request whether a specific commodity is available for barter at a specific time. In other words, existing barter exchanges do not allow a member to readily determine that a desired commodity commonly sold in an industry is not available from any exchange member without contacting the barter exchange operator or other barter exchange members.

A second disadvantage of many existing barter exchanges is that they require the assistance of the barter exchange operator in order to complete a barter transaction. This may result because, as discussed above, barter exchange members desiring to obtain a specific commodity must contact the barter exchange operator to determine if the commodity is available for barter. This may also occur in barter exchanges allowing direct contact between exchange members if the exchange requires members to contact the barter exchange operator once agreement is reached between two exchange members in order to barter a particular commodity. In either case, requiring use of the barter exchange operator to complete a barter exchange transaction is less efficient than a direct barter transaction between exchange members.

A third disadvantage of existing barter exchanges is the difficulty faced by members having commodities for barter in informing other exchange members of the exact commodities available. Specifically, many existing barter exchanges either (1) don't maintain a master list of specific commodities available for barter at a current time or (2) require barter exchange members to provide a manual listing of commodities that are usually sold by the members and therefore may possibly be available for barter. These methods are very inefficient for exchange members having a large variety of items available for barter.

A fourth disadvantage of current barter exchanges is that the value of the barter dollar utilized therein is generally equivalent to the value of U.S. dollars which, as discussed above, can be inflated and is in constant fluctuation. This is because many existing barter exchanges allow members to acquire barter dollars on a one-for-one basis in exchange for U.S. dollars deposited with the item bank operator. Additionally, the equivalency between U.S. dollars and barter dollars in many existing barter exchanges also results from the fact that commodities available for barter are priced in barter dollars that correspond directly to the price in U.S. dollars charged by the exchange member for the commodities when purchased

by non-exchange members using currency. In such barter exchanges, barter dollars are merely a convenient substitute for U.S. dollars and are therefore subject to the same over valuation and inflationary pressures as U.S. dollars.

In addition to current barter exchanges, there are patents generally relating to barter transactions or to electronic commerce, although many of the electronic commerce patents are directed toward facilitating computerized sales transactions, rather than barter transactions. For example, U.S. Patent Nos. 5,592,376 and 5,687,323 to Hodroff disclose a currency exchange network transaction management and accounting system which functions as a currency exchange between a non-cash volunteer and barter economy and the mainstream cash economy. Additionally, U.S. Patent No. 5,794,207 to Walker et al. discloses a method and apparatus for effectuating bilateral buyer-driven commerce.

These patents, however, do not adequately address the disadvantages of existing barter exchanges discussed above. A barter system having an artificially valued currency that does not reflect market supply and demand and a barter system including a plurality of conditional purchase offers organized by subject matters does not facilitate efficient business-to-business barter transactions because these systems do not force all participants to use a standardized name for a particular item and because the latter system does not utilize a barter credit accounting system, i.e., the commodities are directly exchanged between a first party posting a conditional purchase order and a second party accepting the purchase order. Moreover, these "barter" systems do not provide a way for participants to efficiently and quickly search the system to determine whether a particular item desired is available from a system participant. Additionally, systems requiring manual input of data or conditional purchase offers and allowing only for the direct exchange of commodities between barter participants do not provide a barter economic system in which users can quickly and

efficiently input information or trade with other users not having the specific items desired by the first users.

As shown by the discussion above, there is a need for a barter exchange system in which participants desiring to obtain goods by barter can quickly and efficiently determine whether a particular item is currently available for barter from another participant and, if so, the location of that item. There is also a need for a participant having goods available for barter to quickly input pertinent information about those goods into the barter exchange system. Moreover, the need is for such a system to utilize a barter currency to facilitate transactions between members and to allow members to directly complete barter transactions without requiring the services of the barter exchange operator, either in locating specific goods or in completing the barter transaction. In such a system, it would be possible for businesses having a large need for a specific item or a large excess supply of a specific item to efficiently barter those items between other participants in geographically distant locations.

#### BRIEF SUMMARY OF THE INVENTION

The present invention overcomes the disadvantages and drawbacks associated with conventional barter exchanges by providing a computerized barter transaction system characterized by an Item Bank Database containing a standardized name for items typically traded in a particular industry. As used herein, the term "item" refers to both goods and services. The Item Bank Database may be resident on a central barter computer that is accessible over a computer network by participants in geographically remote locations. Users can participate in the barter transaction system of the present invention using so-called personal computers and public computer networks such as the Internet or private industry networks to access the central barter computer. Preferably, the standardized item names in the Item Bank Database are organized within a multilevel organizational scheme. A particularly advantageous multilevel organizational scheme includes the placement of

standardized item names within minor categories, which are in turn organized within major categories. Participants in the barter transaction system can therefore easily locate a particular standardized item name by accessing the central barter computer, selecting the most logical major category for the desired item, selecting the most logical minor category within the selected major category for a particular item, and then selecting the desired item from the standardized item names in the selected minor category. In this way, the barter transaction system of the present invention forces a standardized name for items traded in a particular industry and provides an efficient multilevel classification system designed to facilitate quick and efficient access of a desired item.

Data fields such as location, quantity, cost value, desired cost value, quality, desired quantity, owner, Cross Average Cost, Demand Average Cost, and current market new cost are associated with each standardized item named in the Item Bank Database for a particular industry. Optionally, an image may be attached to a particular entry in the Item Bank Database.

Users having items available for barter access the central barter computer and input those items into the Item Bank Database, using the appropriate standardized item name associated with the items available for barter. Such users also input the quantity of items available for barter, their location, the user's cost value for the items and the quality of the items into the Item Bank Database. Advantageously, the computerized barter transaction system of the present invention allows the inputting of such data into the Item Bank Database using Electronic Data Interchange (EDI) protocols.

Users desiring to acquire goods by barter can access the central barter computer and query for the desired items using the appropriate major category, minor category, and standardized item name corresponding to the items desired. The item bank engine of the central barter computer searches the Item Bank Database to determine whether the desired

items are available for barter from any user and, if they are available, the central barter computer displays the available quantity, location, cost value, and quality information to the user seeking such items for each system user having the items available for barter. The central barter computer does not provide the identity of the users having items available for barter until after a user has committed to a barter transaction. Then, the item owner's identifying information is provided from the central barter computer to the user acquiring goods by barter so that the acquiring user may contact the owner directly to arrange for shipment of the selected items. Shipment costs are borne by the "buyer" user but, in one embodiment, shipping costs may themselves be included in the barter transaction.

In a preferred embodiment, the computerized barter transaction system of the present invention includes several important costing features. The central barter computer calculates a Cross Average Cost for each item that is available in the Item Bank Database and a Demand Average Cost for each item that is either desired by system users but currently unavailable in the Item Bank Database or available in the Item Bank Database but not at the desired cost value. The central barter computer also calculates a conversion rate between barter credits used in the present invention and other currency such as United States dollars for each industry having items available in the Item Bank Database.

The Cross Average Cost for a named item is determined by summing the quantity times the cost value for each item in the Item Bank Database and dividing this sum by the total quantity of the named item available for barter in the Item Bank Database. The Demand Average Cost for a named item is determined by summing the quantity desired times the desired cost value for each item having a desired cost value in the Item Bank Database and dividing this sum by the total quantity of the item desired by system users. The conversion rate of barter credits to U.S. dollars is determined by summing the product of the total quantity of each item available in the Item Bank Database times its associated Cross Average

Cost and dividing the result by the sum of the product of the total quantity of each item available in the Item Bank Database times its associated current market new cost value. By calculating Cross Average Cost and by determining the conversion ratio from currency to barter credits based on Cross Average Cost, the present invention achieves a barter economy in which the value of a barter credit is backed by the value of items available for barter in the computerized barter system.

In another preferred embodiment, the computerized barter transaction system of the present invention includes an accounting system in which each authorized system user has an account of barter credits. A user may establish an initial balance in its barter account to be immediately used in a barter transaction by paying currency to the operator of a computerized barter system, the account balance thereby established being determined by the prevailing conversion rate at the time of payment. Alternatively, a user may establish a balance in its barter account by providing items available for barter that are subsequently bartered for by another user. When the barter transaction is confirmed, the barter account of the item owner is credited an amount of barter credits corresponding to the quantity of items bartered times their associated cost value. The barter accounts of a user acquiring items by barter are debited a corresponding amount. In this way, the present invention advantageously facilitates barter transactions by allowing indirect barter transactions, i.e., barter transactions in which one user may exchange items for barter credits from a second user and then use the barter credits to acquire items from a third user.

The present invention also includes an advantageous method of conducting barter transactions between at least one owner of items available for barter in a predetermined industry and at least one buyer desiring to acquire items by barter. A database of items sold in the industry is maintained, each item being assigned a standardized item name. Barter credit accounts are established for the owner and for the buyer. Quantity, location, and cost

value data for each item available for barter is stored in the database in data fields associated with each respective standardized item name and provided in response to a request from the buyer. A barter transaction authorization is received from the buyer for a predetermined quantity of particular items at a particular location and the barter credit account of the owner is credited and the barter credit account of the buyer is debited in an amount equal to the product of the cost value of the particular items bartered times the quantity of particular items bartered.

In preferred embodiments, the method of the present invention also provides for the calculation of Cross Average Cost and Demand Average Cost for named items in the Item Bank Database as well as for the computation of an exchange rate or conversion rate between barter credits in a particular industry and currency such as United States dollars. In another preferred embodiment, an owner having items available for barter inputs information about those items into the central barter computer using an EDI method such as X12 or XML.

The present invention also advantageously provides a computer-readable medium having computer-executable instructions embodied thereon for conducting barter transactions between at least one owner of items available for barter and at least one buyer desiring to acquire items by barter. The computer-readable maintains a database of items sold in the industry, each item being assigned a standardized item name, establishes a barter credit account for the owner and for the buyer and stores in the database the quantity, location, and cost value data for each item available for barter in data fields associated with each respective standardized item name. Quantity, location, and cost value data for a particular item in the database is provided in response to a request from the buyer. A barter transaction authorization is received from the buyer for a predetermined quantity of particular items at a particular location and then the barter credit account of the owner is credited and the barter credit account of the buyer is debited in an amount equal to the product of the cost value of

the particular items bartered times the quantity of particular items bartered. In other preferred embodiments, the computer-readable medium enables calculation of Cross Average Cost and Demand Average Cost for named items in the Item Bank Database as well as for the computation of an exchange rate or conversion rate between barter credits and United States dollars.

The present invention therefore advantageously creates a computerized barter transaction system having standardized item names and a forced organizational scheme for items commonly traded in an industry and providing a barter credit currency in which the value of barter credits is backed by the value of items available in the computerized barter system. Users of the system can efficiently and quickly determine whether a desired item is or is not available for barter in the system and, if available, the user can readily determine the quantity of such items available in particular locations. Users may determine a Cross Average Cost for a particular item in a particular industry, which reflects the cost value of that item in a particular industry and not the regional currency-based price of the item in a particular geographic market. The conversion rate between barter credits and currency such as U.S. dollars is determined by industry and users having items available for barter may quickly and efficiently enter those items into the computerized barter system using standardized electronic commerce formats. The present invention, therefore, facilitates direct barter exchanges between participating users without requiring intervention of a third party and eliminates the inefficiencies associated with determining whether a specific item at a specific location is currently available for barter in existing barter systems. Additionally, the present invention creates additional supply and demand market influence because of its unique ability to provide industry valuation based on the goods and services in that industry available for trade. This can effectively move the macro economic market to increase

production in various industries based on the increase of demand consumption in other industries.

These and other advantages of the present invention will become apparent upon reading the following detailed description and the appended claims, and upon reference to the accompanying drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of this invention reference should now be had to the embodiments illustrated in greater detail in the accompanying drawings and described below. In the drawings;

Fig. 1 is a block diagram illustrating the configuration of a computerized system for conducting barter transactions according to the present invention;

Fig. 2 is a block diagram illustrating the central barter computer of the system illustrated in Fig. 1;

Fig. 3 is a block diagram of a user computer of the computerized system of Fig. 1;

Fig. 4 is a block diagram illustrating a sample organizational scheme for items bartered in the computerized barter system of the present invention;

Fig. 5 is a block diagram illustrating various data fields associated with each named item in the Item Bank Database;

Fig. 6 is a flow chart illustrating action of an owner supplying items for barter in the computerized barter system;

Fig. 7 is a block diagram illustrating a possible method of identifying items available for barter and inputting those items into the Item Bank Database;

Figs. 8A and 8B illustrate the process by which users may identify an item available for barter using the computerized barter system; and

Fig. 9 is a flow chart illustrating certain operations performed by the item bank engine in processing a barter transaction.

### DETAILED DESCRIPTION OF THE INVENTION

The present invention will now be described fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. The invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. It will be understood that all alternatives, modifications and equivalents are intended to be included within the spirit and scope of the invention as defined by the appended claims.

Turning to **Fig. 1**, there is shown a computerized system **10** for conducting barter exchanges according to the present invention. The system **10** includes a central barter computer **100** and a plurality of user computers **300** interconnected by a communications network **200**. For clarity, the computerized barter system **10** depicted in **Fig. 1** shows only a single central barter computer and several user computers and this application refers to the central barter computer and other computers or computer components in the singular. In actual practice, however, a large plurality of user computers can be interconnected by the network **200** to the central barter computer **100** and the functions of the central barter computer and other computers described herein may be performed by several different computers. Accordingly, it should be understood that the present invention is not limited to a single central barter computer or to singular computer components described, as it is within the skill of those in the art to utilize multiple computers as the central barter computer or to use multiple computers or computer components to perform the functions of a single computer or component.

Indeed, the advantages obtained by the present invention are maximized if the system is utilized by a large number of users willing to engage in barter transactions. The central barter computer can be operated by a barter system provider, which may be an individual or a business. Similarly, the user computers may be operated by individuals or businesses  
5 desiring to engage in barter transactions. It is contemplated, however, that the present invention will be particularly advantageous when used to facilitate business-to-business barter transactions involving large quantities of excess inventory.

Each user computer and the central barter computer is connected via a network interface **305, 130**, respectively, to the network **200**. In a preferred embodiment, the central  
10 barter computer **100** is a worldwide web server machine and the network **200** is a distributed public network such as the Internet. The user computer and the central barter computer may be connected to the network **200** using a public switch phone network such as those provided by local or regional telephone operating companies. The user computers **300** and central  
15 barter computer **100** may also be connected to the network **200** using dedicated data lines, cellular communication systems, satellite networks, cable television networks, or any other suitable connection means. User computers and the central barter computer may also be connected to the network **200** via an internet service providing organization.

Network **200** may also be an industry-specific wide area network (WAN) or virtual private network (VPN). In such an industry-specific network, individual user computers **300**  
20 are assigned unique internal identification numbers to ensure participation of authorized users only. Conventional encryption technologies and procedures such as password protection may be employed to enhance security of data transmitted over the VPN or WAN. Use of industry-specific WAN or VPN may advantageously facilitate the active polling of user computers **300** by the Central Barter Computer **100**, as explained below.

Using the above components, the present invention provides a method and apparatus in which businesses may engage in barter transactions with other businesses located in distant geographic locations. This capability provides an important advantage for many businesses because it allows business to move excess inventory or stock without being forced to sell the stock below cost and because it allows the acquisition of desired items without using currency. This capability is particularly advantageous in those industries in which businesses suffer from a significant problem of excess or “dead” stock. As used herein, the term “dead stock” is used to describe merchandise in the inventory of a retailer or wholesaler for which the demand in that retailer’s or wholesaler’s geographic market is insufficient to sustain inventory turnover at or near the inventory turnover rate prevailing in the industry. As used herein, the term “dead stock” is not used to refer to defective items.

It is not uncommon for retailers in the building materials industry to turn over their inventory of a particular item six times in a given year. When a retailer has invested in an item that fails to turn over at or near the prevailing industry standard for that item, then the retailer has a significant problem because lack of industry standard turnover results in less than industry average profits for that item. For example, if an average business in a given industry turns over a particular item six times in a calendar year and makes a 20% profit on each item, then a business in that industry having inventory of that item turning over only once a year means that the particular business loses five opportunities per year to make a 20% profit on the particular item. In a very real way then, “dead stock” represents lost profits to a retailer or other distributor.

As shown in **Fig. 2**, the central barter computer **100** includes a central processing unit (CPU) **105**, random access memory (RAM) **110**, read only memory (ROM) **115**, a clock **120**, an operating system **125**, a data storage device **155** and a network interface **130**. The central barter computer **100** also includes a searching processor **135**, a calculating processor **140**, a

reporting processor **145**, and an accounting processor **150**. The central barter computer **100** may be a conventional personal computer or a computer workstation having sufficient processing ability and memory. In a preferred embodiment, the central barter computer **100** acts as a world wide web server, receiving and transmitting data from and to system users via the world wide web portion of the Internet. The central barter computer **100** must have the ability to accommodate high volume transaction processing as well as the ability to perform a large number of mathematical calculations and to accommodate large database searches. If the computerized barter system grows large, the central barter computer **100** may include additional processors and databases necessary to efficiently accommodate the number of authorized users and the size of the Item Bank Databases used in a particular computerized barter system.

The CPU **105**, searching processor **135**, calculating processor **140**, reporting processor **145**, and accounting processor **150** may be conventional microprocessors such as the Intel Pentium manufactured by Intel Corporation or other microprocessors manufactured by other companies. Alternatively, the functions performed by the searching processors **135**, calculating processor **140**, reporting processor **145**, and accounting processor **150** may be performed by the CPU **105**.

Conventional network operating systems such as Windows NT, UNIX or other operating systems could be used as the operating system **125** in the central barter computer **100**. The network interface **130** of the central barter computer **100** may be a conventional internal or external modem. In the preferred embodiment, the central barter computer includes software supporting the hosting of a worldwide web site for the central barter computer and the network interface **130** is connected to the Internet via an online service provider or via a dedicated data communication line provided by telephone companies such as a T1 or T3 line. The central barter computer **100** may also include conventional web

software such as Netscape Navigator manufactured by Netscape Corporation or Internet Explorer by Microsoft Corporation.

The data storage device **155** may include magnetic storage devices commonly referred to as "hard disks," CD-ROM storage devices, flash memory devices, optical storage devices, magnetic tape storage devices, or volatile semiconductor memory devices, or a combination of the aforesaid mentioned items. The data storage device **155** includes databases necessary for processing barter transactions in the computerized barter system, including an Item Bank Database **160**, an authorized users database **165**, an accounting database **170**, and an applications software database **175**. A database management system such as those produced by Oracle Corporation may be used in developing and managing the databases in the central barter computer.

The Item Bank Database **160** includes a master listing of standardized names for items commonly traded in a particular industry. As explained in more detail below, requiring the use of a standardized name for a particular item in a given industry significantly facilitates the ability of computerized barter transactions among geographically distant users because it allows such users to efficiently identify a particular item in a computerized barter transaction system. The master listing of named items is organized in the items bank database **160** in a multilevel organizational scheme which, in a preferred embodiment, includes standardized items named within a minor category and minor categories within major categories. The Item Bank Database also includes a description of each standardized item name as well as data fields for each of the named items.

The authorized user database **165** maintains data associated with each authorized user of the computerized barter system, such as name, address, phone number, email address, web site address, names of representatives, and other like items. The authorized users database

**165** also includes a unique user number assigned to each authorized user as well as information regarding transactions conducted by each user.

The accounting database **170** includes an account of barter credits for each authorized user and information relating to the conversion rate between barter credits and other  
5 internationally recognized currencies, such as U.S. dollars, in a particular industry for which the computerized barter system is used. The applications database **175** includes data used by various software applications in the central barter computer **100**.

The central barter computer **100** also includes a barter manager interface **180**, which may include a keyboard, mouse, video monitor, scanner, voice recognition system, printer,  
10 and other devices commonly used to facilitate data exchange between a computer user, such as a barter manager, and a computer, such as the central barter computer.

A representative user computer **300** is illustrated in **Fig. 3**. The user computer **300** includes a network interface **305**, a user interface **310**, a CPU **320**, RAM **325**, ROM **330**, a clock **335**, and a data storage device **340**. A conventional personal computer or a computer  
15 workstation having sufficient memory and processing ability may be used as the user computer **300**. The network interface **305** facilitates data transmission between the user computer **300** and the network **200**. In a preferred embodiment, the network **200** is a public distributed network system such as the Internet and the user computer **300** includes suitable Internet browser software such as Netscape Navigator or Microsoft Internet Explorer. The  
20 network interface **305** may be an internal or external modem and may be connected directly to the network or Internet using a direct communication line or a high band width communication line such as a T1 or T3 line, or the network interface **305** may be connected to the Internet via an Internet service provider. The CPU **320** of the user computer **300** may include a conventional microprocessor such as an Intel Pentium processor or other similar  
25 microprocessors commonly used in personal computers or workstations. The data storage

device **340** may include magnetic “hard disk” devices, CD-ROM devices, volatile semiconductor memory, flash memory, optical storage unit, magnetic tape storage units, or similar storage devices. Data exchange between a user and the user computer **300** is facilitated by the user interface **310**, which may include a keyboard, mouse, scanner, printer, voice recognition equipment, video monitor, and other devices commonly used to exchange data between a user and a personal computer.

Together, the user computers **300**, network **200**, and central barter computer **100** are used by businesses to facilitate barter transactions between businesses located in geographically distant locations from each other. While the present invention is certainly capable of being advantageously used by individuals to conduct barter transactions with other individuals, it is believed that the present invention can be even more advantageously used by businesses. The present invention is particularly advantageous for use by retailers and distributors having excess inventory dead stock in a particular geographic market and lacking a dedicated national redistribution system as might commonly be used by national retail chains. The present invention may also be advantageously used by businesses having excess supply of a particular item and desiring other items, but not having sufficient cash on hand to purchase the desired quantity of the other item in its local market. As previously discussed, dead stock represents an under performing investment in items as well as the very real loss of profits, a loss which increases as time passes and the dead stock is not sold.

As previously mentioned the term “items” as used herein includes both goods and services, as either may be effectively bartered using the present invention. Also, users of the computerized barter system may act as an owner of items to be bartered in one transaction and as an acquirer or “buyer” of items to be procured by barter in another transaction. For clarity, the term “owner” is used herein to describe a user providing items to a barter transaction and the term “buyer” is used herein to describe users acquiring items by barter in

a particular transaction. The term "buyer" is thus not used herein to describe a person or business attempting to acquire goods by a conventional sales transaction wherein that person or business pays cash or currency such as U.S. dollars in exchange for the desired item.

Also, while the present invention will be described herein in relation to a particular industry, it should be understood that many different industries may advantageously utilize the computerized barter system of the present invention. Indeed, it is believed that the present invention can be most advantageously used when users in more than one industry participate. In this way, users of the present invention could acquire items from different industries by barter exchange.

An important feature of the present invention is that items commonly traded in a particular industry are assigned a standardized item name. Currently, wholesalers and retailers operating in the same industry but in different geographical markets often refer to an identical item using a different name or using proprietary numbering systems or locally prevalent names. While this practice may be sufficient for a particular retailer or distributor, it significantly impedes the ability of businesses in different geographic markets to barter items because much effort and time is required to ensure that both parties are referring to the same item.

The computerized barter system of the present invention eliminates this problem by providing a standardized item name for items commonly traded in a particular industry. To the maximum extent possible, the standardized item names selected for use in the present invention are terms readily understood by retailers and distributors in a particular industry. Also, descriptions are associated with each standardized item name in the present invention in order for users of the computerized barter system to ensure that a named item is the actual item desired before completing a barter transaction. The standardized item names are stored in the Item Bank Database 160. Preferably, the Item Bank Database should include a

standardized name for as many items that are sold or traded in a particular industry as possible. In a preferred embodiment, the Item Bank Database includes a standardized item name for at least 90% of the items commonly sold or traded in a particular industry regardless of whether or not those items are currently available for barter from a system user.

5 While standardized naming of items significantly improves the efficiency of barter transactions between users in different geographic markets, it is also advantageous to create an organizational scheme for the standardized item names to further facilitate locating a particular item name. Such an organizational scheme should allow retailers and distributors in a particular industry to locate a particular standardized name of a given item in the Item Bank Database using knowledge and terms commonly available in that industry.

10 The present invention uses a multilevel organizational scheme for standardized item names in a particular industry. In a preferred environment, the list of standardized item names is organized into minor categories, which in turn are organized into major categories. In other words, the Item Bank Database contains a plurality of major categories; each major category contains a plurality of minor categories; and each minor category contains at least one standardized item name. Importantly, a particular standardized item name is included in only one major category and only one minor category.

15 An example of such a preferred multilevel organizational scheme for items in the building materials industry is illustrated in **Fig. 4**. As previously described, the Item Bank Database **160** for the building materials industry would contain a plurality of major categories **1650** and each major category would be further divided into at least one minor category **1651**. Each minor category includes at least one standardized item name **1652**. Each standardized item name **1652** has an associated item description **1653**.

20 In the specific example illustrated in **Fig. 4**, three of the major categories in the plurality of major categories contained in the Item Bank Database **160** for the building

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materials industry are labeled “lumber - yellow pine,” “lumber - treated,” and “lumber - spruce.” The major category of “lumber - yellow pine” is further divided into a plurality of minor categories, two of which are “grade # 2, 2 x 4” and “grade #2, 2 x 6.” The minor category of “grade # 2, 2 x 4” contains a plurality of standardized item names **1652**, three of which are “248YP,” “2410YP,” and “241YP.” As shown by the item descriptions **1653** associated with each of the standardized item names **1652**, the item name “248YP” is the standardized name for an eight foot long 2 x 4 made of yellow pine # 2. The item name “2410YP” is the standardized name in the Item Bank Database for a ten foot 2 x 4 made of yellow pine # 2. The item name “2412YP” is the standardized item name in the Item Bank Database for a twelve foot 2 x 4 made of yellow pine # 2.

The standardized item names and multilevel organizational scheme allow users in a particular industry to quickly locate the standardized item name for a particular item desired to be supplied or attained through a barter transaction using the item bank engine of the present invention. For example, a lumber distributor or retailer user in a geographic market having a high demand for 2 x 4's can use a user computer **300** to access the central barter computer **100** via a Network **200** such as the world wide web portion of the Internet. Once logged onto the central barter computer **100**, the user can access the Item Bank Database **160**, select the major category, “lumber – yellow pine,” then select the minor category of “grade # 2, 2 x 4,” and then select the standardized item name corresponding to the length of yellow pine # 2 2 x 4 desired. In a preferred embodiment, item descriptions are displayed with their corresponding standardized item names. Alternatively, the user can utilize a search function of the present invention in which the searching processor searches through the item descriptions **1653** for the desired item to determine the standardized item name. Similarly, users desiring to barter dead stock of a certain item can access the Item Bank Database and

utilize the same process to select the standardized item name corresponding to the dead stock item.

Occasionally, a user of the computerized barter system will desire to obtain or provide an item not having a standardized item name in the Item Bank Database. When this occurs, the user can to select a “miscellaneous” minor category within a major category and enter descriptive information into the Item Bank Database. Upon receiving such an entry, the central barter computer **100** initiates an alert to the barter system manager, who will review the item in the Item Bank Database and determine whether a standardized item name exists for the item. If a standardized item name does exist, the barter computer system operator will move the entry to that standardized name. If a unique standardized name for the item does not exist, then the barter system manager will create a temporary item name in an appropriate minor category and move the entered item to that newly created temporary item name. The barter system computer operator will also create an item description corresponding to the newly created item name so that the description will be available for users to search in the Item Bank Database. It is contemplated that use of temporary item names will be minimal, but necessary, however, to accommodate the barter of special orders or specially-made items created originally for sale but subsequently desired to be bartered.

Each standardized item name **1652** in the Item Bank Database **160** has a plurality of associated data fields, as illustrated in **Fig. 5**. These data fields allow the item bank engine to quickly and efficiently search the Item Bank Database. In a preferred embodiment, each standardized item name **1652** includes the following associated data fields: quantity **1601**, location **1602**, cost value **1603**, quality **1604**, owner **1605**, Cross Average Cost **1606**, Demand Average Cost **1607**, current market new cost **1608**, an optional image **1609** (which may include image files or video files), desired quantity **1610**, and desired cost value **1611**. Of these fields, data is imputed into the quantity **1601**, location **1602**, cost value **1603**,

quality **1604** and image **1609** fields by owners having items available for barter. The desired quantity **1610** and desired cost value **1611** fields are entered by buyers desiring to obtain specific items by barter that are not currently available from owners in the computerized barter system. The Cross Average Cost **1606** and Demand Average Cost **1607** fields are  
5 calculated by the calculating processor **140** of the central barter computer **100** for each standardized item name and will be discussed in more detail below.

The current market new cost field **1608** is the current recognized price of a named item in currency such as U.S. dollars if that item were purchased on the open market new. In a preferred embodiment, the current market new cost data is provided to the central barter  
10 computer **100** from a third party under contract with the operator of the computerized barter system. Many industries have organizations that track market prices for items in the particular industry. These prices are referred to using different names in different industries and by different market watchers, but commonly used terms include “current market new cost” or “replacement cost.” For example, Random Lengths is a company that tracks and  
15 calculates replacement costs in the lumber industry and Trade Services provides information on market costs and prices to the electrical and plumbing industries. Such services are especially important in industries, such as the lumber industry, where the cost of items is particularly volatile. In a preferred embodiment, replacement cost or current market new cost values are provided to the central barter computer **100** in electronic form so as to be  
20 easily received and processed by the central barter computer **100** by such third party services under contract with the operator of the computerized barter system.

The owner field **1605** is provided by the central barter computer **100**. Each authorized user of the computerized barter system is assigned a unique user number to allow accounting and tracking barter transactions. In **Fig. 5**, the owner data is illustrated as a  
25 separate data field associated with each standardized item name in the Item Bank Database.

The central barter computer **100** stores data in the data fields illustrated in **Fig. 5** by each owner having a named item available for barter or desiring to acquire a named item by barter. In other words, the central barter computer accommodates a plurality of owners entering data about the same named item and maintains the data entered by each owner separately  
5 associated with that owner. In an alternative embodiment, the owner data may be incorporated as a separate organizational level in the multi-level organizational scheme of the Item Bank Database rather than being one of a plurality of data fields associated with a named item. In this alternative embodiment, major categories are divided into minor categories and each minor category contains at least one standardized item name. For each  
10 standardized item name, data is further categorized by owner.

An important feature of the present invention is that the actual identity of an owner making items available for barter in the computerized barter system is not available to system users until a buyer commits to conducting a barter transaction, at which point the owner name associated with the items to be bartered is made available to the buyer so that the buyer  
15 may contact the owner to arrange for shipment of the bartered items. In a preferred embodiment, it is the buyer's responsibility to pay for shipment of the items from the location of the items to the location desired by the buyer. If shipping companies are also users of the computerized barter system and make shipment services available for barter then a buyer may choose to have shipping costs deducted from its barter credit account.

Each of the data fields illustrated in **Fig. 5** will now be described in detail. An owner  
20 having items available for barter accesses the central barter computer **100** and enters the quantity of items available, their location, their quality, cost value, and, if a third party is not used to supply current market new cost data, then the owner enters this data as well. These entries are stored, respectively, in the quantity data field **1601**, the location data field **1602**,  
25 the quality data field **1604**, the cost value data field **1603**, and the current market new cost

data field **1608** in the Item Bank Database **160**. The location field **1602** may be free text or it may contain a standardized listing of cities and states, in which case the owner would select the closest city to the location of the goods. Importantly, the location field **1602** refers to the location of the items available for barter, which is not necessarily the owner's location. In this way, the present invention facilitates the barter of items by an owner that is in a different geographical location than the owned items. The quality field **1604** is a free text field. Cost value refers to the actual cost of the named item that the owner paid, in currency such as U.S. dollars, for the item when it acquired them. The cost value therefore does not refer to the price that the owner sells the item for at retail.

While the computerized barter system is not necessarily self-policing in that there is no automatic mechanism preventing an owner from entering a cost value greater than its actual cost value, several mechanisms are available to help ensure that such practices do not occur with regularity. For example, the contract between users and the computerized barter system operator can obligate users to enter actual cost values and can provide the right to conduct an audit in the event a questionable cost value is discovered and remedies in the event that inaccurate cost value information is actually entered. Moreover, it is actually in the owner's interest to enter actual cost value because in all likelihood the owner would be more than happy to obtain actual cost value in a barter transaction since owners having dead stock often are forced to accept far less than their cost value to dispose of such dead stock in the conventional sales market. Finally, entering an exceedingly high cost value may result in no other user conducting a barter transaction with such an owner if other owners having the particular named item available enter their actual cost value into the computerized barter system.

When a buyer desiring to acquire a specific item by barter determines from the Item Bank Database that the specific item desired is not currently available from another user, or

is available but not in the desired quantity or at the desired cost value, the buyer may enter the quantity desired to be obtained in the desired quantity field **1610** and a desired cost value for the items in the desired cost value field **1611**. The desired quantity data field **1610** and the quantity data field **1601** are generally mutually exclusive, but need not be. In other words, data is present in the quantity field only if the associated named item is available from a user and data is generally present in the desired quantity field **1610** only if the associated item is unavailable from a system user. But if items are not available in the Item Bank Database in the desired quantity or at the desired cost value, then there may be data in both the quantity and desired quantity fields. Similarly, the cost value data field **1603** and the desired cost value data field **1611** are also generally mutually exclusive, but need not be. Data is present in the cost value field **1603** if the associated item is available from a system user and data is generally present in the desired cost value field **1611** only if the associated item is not available from another user. But if items are not available in the Item Bank Database in the desired quantity or at the desired cost value, then there may be data in both the cost value and desired cost value fields.

An important feature of a preferred embodiment of the present invention is the ability of the central barter computer **100** to calculate the Cross Average Cost for each named item **1652** in the Item Bank Database **160** for which items are available from a system user and the ability of the central barter computer **100** to calculate a Demand Average Cost **1607** for each item that is either desired by a buyer but currently unavailable in the Item Bank Database or available in the Item Bank Database but not at the desired cost value. Cross Average Cost **1606** represents the average unit cost value of a named item in the Item Bank Database **160**. This average therefore reflects the different cost values **1603** entered by different owners in different geographic markets. The calculating processor determines Cross Average Cost by summing the product of the quantity **1601** multiplied by the cost value **1603** of a named item

for each owner having that item available for barter in the Item Bank Database and dividing that sum by the total quantity of the item available in the Item Bank Database. Cross Average Cost (CAC) for a named item may be determined using the following equation:

$$5 \quad CAC = \frac{(\text{quantity})(\text{cost value}) + (\text{quantity})(\text{cost value}) + (\text{quantity})(\text{cost value}) + \text{etc.}}{\text{total quantity of the named item available in the Item Bank Database}}$$

For example, if a particular named item is available in the Item Bank Database from two owners, the first owner having entered a quantity of 10 at a cost value of \$5.00 and the  
 10 second owner having entered the quantity of 10 at a cost value of \$10.00, then the Cross Average Cost of that named item in the Item Bank Database is 7.50 barter credits. Cross Average Cost gives system users a reasonable perspective of the cost value for a particular item in case items are overvalued or undervalued in a particular geographical market. In this way, CAC is reflective of true supply of an item since items may be overvalued or  
 15 undervalued in a remote geographical market.

Similarly, Demand Average Cost reflects the average desired cost value of a named item desired by a buyer but either unavailable in the Item Bank Database or available in the Item Bank Database but not at a desired cost value. Demand Average Cost (DAC) for a named item may be determined by summing the product of quantity desired times desired  
 20 cost value for each owner entering such data for the named item and dividing that sum by the total quantity desired of the item. DAC, therefore, may be determined by the following equation:

$$25 \quad DAC = \frac{(\text{quantity desired})(\text{desired cost value}) + (\text{quantity desired})(\text{desired cost value}) + \text{etc.}}{\text{total quantity desired in the Item Bank Database}}$$

As an example, if two buyers desire to obtain a specific item by barter that is unavailable in the Item Bank Database and the first owner entered a desired quantity of 5 and a desired cost value of \$20.00 and the second buyer entered a desired quantity of 10 and a desired cost value of \$40.00, then the Demand Average Cost for that named item in the Item Bank

Database would be 33.33 barter credits. Demand Average Cost serves an informational purpose because it lets owners know where there is a demand for a specific item. If, for example, a hurricane hit Florida and the supply of plywood in that market was suddenly depleted, then the DAC for plywood would presumably increase as system users in Florida entered desired quantity **1610** and desired cost values **1611** into the computerized barter system **100**. Additionally, Demand Average Cost also serves to inform owners having items available for barter in the Item Bank Database that their cost value may be too high for the demand, as buyers wanting the items, but not at the available cost value, may enter desired cost value data for the items into the Item Bank Database. The item bank engine of the present invention can be used to provide reports to system users if DAC increases or decreases by a predetermined amount or at a predetermined rate.

The Cross Average Cost **1606** and Demand Average Cost **1607** features of a preferred embodiment of the present invention contribute significantly toward the establishment of a barter system in which the value of a barter credit is backed by the value of the actual goods in the barter system. Cross Average Cost is recalculated by the central barter computer **100** whenever an owner enters an item available for barter into the Item Bank Database **160** or modifies the quantity or cross value of a previous entry. Cross Average Cost **1606** is also recalculated whenever a barter transaction is completed, as this necessarily changes the quantity of an item available for barter. Demand Average Cost **1607** is recalculated whenever a buyer enters a desired quantity or desired cost value into the Item Bank Database **160** or changes a previous entry. The Cross Average Cost feature facilitates an item-backed barter credit because owners entering items available for barter into the Item Bank Database **160** may elect to accept the Cross Average Cost as the cost value **1603** for these items. In this event, the cost value of those items does not reflect their value in currency or U.S. dollars that the owner paid for the items but instead reflects the value in barter credits of that named

item in the Item Bank Database **160**. This is especially significant in instances where an owner enters cost value data **1603** into the Item Bank Database **160** and discovers that the prevailing Cross Average Cost **1606** is lower than the owner's actual cost value.

Presumably, in this event buyers of that item will not select the owner having a higher cost value and thus that owner will eventually be forced to accept the Cross Average Cost **1606** as the cost value **1603** for the items. In this way, the value of the barter credit of the computerized barter system **10** is actually backed by the value of the items in the Item Bank Database.

Cross Average Cost and Demand Average Cost are generally mutually exclusive, but need not be. In other words, if data is present in the Cross Average Cost field **1606** for a named item, then there is usually no data present for that item in the Demand Average Cost field **1607**. However, if the demand for a particular item is for a cost value below the cost value of the item in the Item Bank Database, or if the quantity demand for a particular item is greater than the quantity of the item available in the Item Bank Database, then there may be data present in both the Cross Average Cost and Demand Average Cost fields for a particular item.

The current market new cost data field **1608**, which is preferably provided by a third party and updated on a periodic basis as desired, such as daily, is used by the calculating processor **140** to calculate the conversion rate between a barter credit and actual currency such as a U.S. dollar. Specifically, the conversion rate between a barter credit in the computerized barter system of the present invention and U.S. dollars is equal to the total trade value of items in the Item Bank Database for a particular industry divided by the value of those items on the open market. Thus, in the present invention, the conversion rate between U.S. dollars and barter credits is determined by industry.

The conversion rate can be calculated by summing the product of the quantity of each named item available in the Item Bank Database **160** times its associated Cross Average Cost and dividing this sum by the sum of the product of the total quantity of each named item available in the Item Bank Database times its associated current market new cost value. The conversion rate, therefore, may be determined by the following equation:

$$\text{Conversion Rate} = \frac{(\text{total quantity of a named item available in the Item Bank Database})(\text{CAC of that named item}) + (\text{total quantity of a named item available in the Item Bank Database})(\text{CAC of that item}) + \text{Product of each named item available in the Item Bank Database}}{(\text{total quantity of a named item available in the Item Bank Database})(\text{current market new cost for that item}) + (\text{total quantity of a named item available in the Item Bank Database})(\text{current market new cost for that named item}) + \text{Product for each named item available in the Item Bank Database.}}$$

For example, if there are only two named items available in the Item Bank Database, 10 of the first item available at a Cross Average Cost of \$10.00 each and 20 of the second item available at a Cross Average Cost of \$30.00 and if the current market new cost value of the first item is \$15.00 and the current market new cost value of the second item is \$40.00, then the conversion rate is .7368, which means that one U.S. dollar would only buy .7368 barter credits in the computerized barter system. This result is not surprising considering that actual currency is often inflated because it includes the cost of information as well as inflation and speculation.

Having discussed the system architecture of the computerized barter system **10** and the structure and information contained in the Item Bank Database **160**, operation of the computerized barter system and Item Bank Database will now be discussed. Turning to **Fig. 6**, there is presented a flow chart illustrating how an owner enters items available for barter into the Item Bank Database **160** in a preferred embodiment of the present invention. For accessing the central barter computer **100**, an owner must first establish an account in the computerized barter system, as illustrated in step **2005**. Opening an account involves contacting the operator of the computerized barter system and providing the required

information. Once an account is established for a user, the user is assigned a unique identifying number by the accounting processor that is used in the central barter computer 100 to identify that user.

5 Additionally, existing barter exchanges can establish accounts on the computerized barter system of the present invention in one of two ways. First, barter dollar accounts of existing barter exchanges may be converted to accounts of barter credits on the computerized barter exchange of the present invention by applying the conversion rate between U.S. dollars and barter credits to the barter dollar accounts for those existing barter exchanges. Barter dollars of existing barter exchanges are not necessarily therefore connected to barter credits in the present invention on a one-for-one basis. This is because the value of barter 10 dollars at existing barter exchanges is based on the value of the U.S. dollar, not on the value of the goods or services available through the existing barter exchanges. In this regard, when many existing barter exchanges refer to their barter dollars as being "backed" by the goods available through the exchange, they mean that barter dollars in a user's account were 15 generated by trading goods through the barter exchange. When used in that way, the term "backed" refers to the source of barter dollars in a user's account or how those barter dollars were generated.

Conversely, barter credits in the present invention are "backed" by the items in the Item Bank Database in the sense that the value of the barter credits is determined by the value 20 of the items in the Item Bank Database for a particular industry, system similar to the "gold standard" where value is "backed" by goods in the system.. This results from cross average costing, discussed above, in which owners of items available for barter having paid a higher amount for items on the open market can accept a prevailing Cross Average Cost for those items and from establishing conversion rates by industry between U.S. dollars and barter 25 credits in the computerized barter system of the present invention. In this way, the barter

system of the present invention overcomes a the problem in the conventional barter industry in which barter houses are forced to "balance" their systems artificially at times with cash, a problem caused when trade ability is given to a barter house client based on an input of "dollars" of a currency.

5           A second way in which existing trade exchanges can establish barter credits in an account of the present computerized barter system is by direct trading. An existing barter house or exchange, such as Atwood Richards (a large multinational barter house), can utilize the computerized barter system of the current invention to barter goods or services. Indeed, it is contemplated that existing barter exchanges will be active users of the computerized  
10       barter system of the present invention.

          In step **2010** the owner determines specific items desired to be bartered. The owner may allow all items in its inventory to be available for barter, or the owner may just make dead stock available for barter. The owner also may use other factors to determine which items to make available for barter.

15           In step **2015**, the owner logs onto the central barter computer **100** using a user computer **300** that accesses the central barter computer via the network **200**, as previously discussed. Logon to the central barter computer **100** is completed when the owner provides its authorized password and performs the required logon procedures. While it is contemplated that password protection offers sufficient security for the computerized barter  
20       system **10** of the present invention, additional security procedures commonly used in electronic commerce may also be employed with the present invention if desired.

          Once logged onto the central barter computer **100**, the owner must then ascertain the standardized item name corresponding to the items desired to be bartered. This information may be ascertained in one of two ways. The owner may select the logical major category  
25       corresponding to the items desired to be bartered (step **2020**) and then select the logical

minor category in the selected major category, as illustrated in step **2025**. Alternatively, an owner may search the item descriptions **1653** for the standardized item names **1652** and determine the appropriate standardized item name for the items desired to be bartered, as illustrated in step **2060**. Regardless of the method used for determining the standardized item names, as illustrated in step **2030** each owner entering items into the Item Bank Database must select a standardized name corresponding to the items desired to be bartered. Once the standardized name **1652** is selected in step **2030**, the owner enters the quantity of that item to be bartered, as illustrated in step **2035**, and then enters the location of the items to be bartered, as illustrated in step **2040**. As previously discussed, the location of the items may be different than the physical location of the owner and the location information may be entered as a free text field, or, in a preferred embodiment, as a standardized field containing cities and states.

The owner then enters the cost method desired in step **2045**, which may either be entering the actual cost value of the items to be bartered as illustrated in step **2050** or, alternatively, the owner may select cross average costing as illustrated in step **2055**. As previously discussed, the cost value is the unit value of the item that was paid in currency by the owner when the owner originally bought the item. If the owner selects cross average costing, then the cost value for that owner's items will equal the cross average cost for that named item existing in the computerized barter system at the time when a buyer commits to barter for those items.

While **Fig. 6** illustrates the actions required of an individual owner, it should be understood that a plurality of owners access the central barter computer **100** and input data making items available for barter. It should also be understood that a plurality of different owners may make the same item available for barter in the computerized barter system and

thus the Item Bank Database **160** will contain information for named items from different owners.

A particularly advantageous method of inputting items for barter utilizing an owner's existing computer system is illustrated in **Fig. 7**. Large owners typically utilize computer inventory management software to manage their inventory and to conduct other, non-barter, electronic commerce transactions. For example, it is known in electronic commerce to use the X12 protocol for Electronic Data Interchange to transmit standardized purchase orders between businesses. In fact, many existing inventory control software applications include the generation of purchase orders in X12 format as a part of the inventory management function. XML format is also gaining in popularity as an EDI format.

The present invention advantageously allows owners having the capability of electronically generating purchase orders in EDI formats such as X12 or XML format automatically to input data on items available to be bartered into the central barter computer **100** using the X12 or XML purchase order format. As illustrated in **Fig. 7**, an owner may run a report to identify items in inventory as candidates to be bartered, such as dead stock. The criteria for such items may be determined by the individual item owners. For example, owners may desire to barter all inventory items that have not been sold in a given period of time, or all items above a certain inventory level. Alternatively, an industry specific criteria – such as an industry-specific definition of under performing inventory – may be used to determine items to barter. This is illustrated in step **2060**. After generating such reports, the owner may then select specific items to be bartered from the report, as illustrated in step **2065**. The owner can then generate purchase orders for the goods to be bartered in step **2070** and, using its user computer **300**, transmit those purchase orders for the items to be bartered in X12 or XML format over the network **200** the central barter computer **100**, as illustrated in step **2075**. The central barter computer **100** then receives the X12 or XML purchase orders

for items to be bartered in step **2080**. In step **2085**, the central barter computer **100** translates data contained in the X12 or XML purchase orders into Item Bank Database data fields and updates the Item Bank Database. Because the data fields in the EDI protocol used and the Item Bank Database are known, it is within the knowledge of those skilled in the art to write a simple program capable of translating data from the EDI format into an Item Bank Database. In this way, the computerized barter system **10** of the present invention facilitates the inputting of a large amount of data on items available for barter because it allows for such input to be accomplished using the owners' existing computer systems and familiar EDI format such as X12 or XML format and because it allows for automated input of this data into the Item Bank Database.

It should be noted that, if desired, the central barter computer can be configured to perform the steps illustrated in **Fig. 7**. More particularly, the central barter computer **100** can be programmed to periodically poll user computers, execute a program to identify items available for barter in the database of items on the user computer based on criteria established by the item owners. Once available items are identified, data corresponding to the available items is transmitted back to the central barter computer in an EDI format such as X12, where the data is translated and loaded into the Item Bank Database. Such active polling and automated data input into the Item Bank Database may be particularly advantageously employed where thin client computing technology is used on an industry-specific Virtual Private Network or Wide Area Network.

It should also be noted that services are items that may be bartered using the item bank engine of the present invention. For this purpose, major categories **1650**, minor categories **1651**, and standardized item names **1652** corresponding to commonly offered services in a particular industry are established in the Item Bank Database for that industry. When entering services into the Item Bank Database, the quantity field **1601** represents the

amount of hours of a particular service that the service provider is willing to barter. This quantity may be expressed as the amount of hours over a predetermined period of time, such as over the next six months following the date of entry, or as discussed below, this quantity could represent the total hours of services bartered received from a scheduling program. The cost value **1603** is the actual cost incurred by the service provider in providing the named service and the location **1602** is the location of service availability. In this way, the item bank engine can value the named service in the Item Bank Database or in a given geographic area using the Cross Average Cost function. High demand for a particular named service in a particular area can be identified by the existence of Desired Cost Value data in the Item Bank Database for particular areas.

As an example, computer terminals or kiosks having access to the Item Bank Database could be positioned in lumber yards or building supply stores. Contractors visiting the lumber yard or building supply stores could use the terminals or kiosks to enter data into the Item Bank Database relating to the contractor's services and availability. For example, a framing contractor might use such a terminal or kiosk to enter his or her specialty (framing), available quantity of time that the contractor is willing to barter over the next six months (100 hours) , and the cost to the contractor in providing framing services (\$8.00 per square foot) into a construction Item Bank Database. Once service data is entered into the Item Bank Database, users of the system can identify services available for barter in a particular area and the relative cost of those services, i.e., by comparing the Cross Average Cost for the services to the cost value of the service available for barter in a particular location.

Advantageously, the computer terminals or kiosks may be provided with a scheduling program that a contractor can use to enter the specific days and number of hours per day that the contractor is making services available for barter. Once entered in the scheduling

program, the data is then sent from the scheduling program into the central barter computer, where the data entered by the contractor is transferred into the Item Bank Database.

Once items available for barter are inputted into the Item Bank Database, then buyers are able to directly determine if desired items are available for barter by accessing the Item Bank Database using their user computer **300** and the network **200** to access the central barter computer **100**. **Figs. 8A and 8B** illustrate a process in which a buyer can access the Item Bank Database and make a barter transaction. In step **3005**, the buyer establishes an authorized account on the computerized barter system, just as owners do. In the event that a buyer desires to acquire items by barter but has not previously been an owner of items bartered in the computerized barter system so as to have amassed barter credits in its account, the buyer can obtain barter credits required for a specific barter transaction by supplying currency such as U.S. dollars to the operator of a computerized barter system. The amount of barter credit obtained by providing the currency is determined by the existing conversion rate at the time the buyer provides currency to the computerized barter system operator. The determination of this conversation rate was previously discussed. Barter credits so obtained by conversion of U.S. dollars must then be used in the specific barter transaction for which the credits were acquired. In other words, barter credits in the computerized barter system of the present invention cannot be directly acquired by using U.S. dollars and then "held" indefinitely in a user's account, as this practice could lead to barter credit speculation.

A buyer having a balance of barter credits in its account and desiring to obtain items by barter then logs onto the central barter computer **100** using an authorized password and login procedures, as illustrated in step **3015**. To determine whether the desired item is available from another system user, the buyer selects the logical major category **1650** corresponding to the desired item, then selects the logical minor category **1651** corresponding to the item, and then selects the standardized item name **1652** within the minor

category, as illustrated in steps **3020**, **3025**, and **3030**. Alternatively, the buyer can search the item descriptions **1653** associated with the standardized item names to identify the standardized name corresponding to the item desired to be obtained, as illustrated in step **3085**. After selecting the standardized item names **1652** corresponding to the items desired to be obtained by barter, as illustrated in step **3030**, the buyer has the option to also select a desired location of the items, as illustrated in step **3035**.

The buyer then initiates a search function of the item bank engine using an appropriate on-screen command in step **3040**. As explained more fully below, after the search function is initiated, the item bank engine searches the data in the Item Bank Database **160** to determine whether the desired items are available from a system user and displays the results of the search listing to the initiating buyer. As illustrated in steps **3045**, the buyer then views the search result listing, which includes the quantity **1601**, cost value **1603**, quality **1604** and location **1602** data fields of the items requested for each owner; however, the identify of the item owners is not provided to the buyer with the initial search results. Search results may be sorted by any of the data fields displayed.

If the items are available from item owners in the Item Bank Database **160**, and the buyer desires to complete a barter transaction, then the buyer next chooses the owner from which to obtain the desired items. While the owner's identity is not displayed, the quantity, location, cost value, and quantity fields are presented to the buyer in the search result listings as a data group available from a particular but unidentified owner. After choosing which owner to obtain the items from in step **3050**, the buyer then executes a "buy" command using the appropriate on screen command in step **3055**. At this point the barter transaction is completed in the computerized barter system and shipment must be arranged to transport the items bartered from their location to the buyer's desired location. In a preferred embodiment, illustrated in step **3060**, it is the buyer's responsibility to arrange and pay for transportation of

the items bartered. Because the central barter computer provides owners' identity information to the buyer after execution of a "buy" command, the buyer can contact the item owner directly to coordinate the shipping details (step 3090).

If, when viewing the search result listings in step 3045, a buyer determines that the desired items are not available from a user in the computerized barter system, or are available but not in the desired quantity or at the desired cost value, then the buyer may enter a desired quantity of those items into the Item Bank Database 160 (step 3065), enter a desired cost value of the items in the Item Bank Database (step 3070), and may optionally enter a desired location of the items (step 3075). Instead of entering a desired cost value, the buyer may elect to accept the Demand Average Cost as its desired cost value, as illustrated in step 3080.

Processing of a barter transaction by the item bank engine in the central barter computer 100 is illustrated in Fig. 9. In step 4005, the central barter computer 100 receives a buyer query, which may be for a specific named item, for a named item at a specific cost value, or for a named item at a specific location. After a buyer initiates the search function of the item bank engine, the engine compares the query to the items available in the Item Bank Database 160 and their corresponding data (step 4010) and determines whether the items sought, including the location and cost value sought, are available (step 4015). If the desired items at the desired cost value and location are not available in the Item Bank Database 160, then the item bank engine receives the desired quantity 1610 and desired cost value 1611 data from the buyer in step 4016 and then recalculates the Demand Average Cost 1607 for the item sought (step 4017).

Alternatively, if the items sought are available in the Item Bank Database 160, then the item bank engine outputs the query results to the buyer in step 4020, which as previously discussed, includes all data fields associated with the item sought, except for the owner's identification. After viewing the search results the buyer may select a particular, though

unidentified, owner from which to acquire goods by barter and authorize the barter transaction to occur. In this case, the item bank engine receives the barter authorization command from the buyer in step **4025**. The ability of a buyer to directly determine whether a desired item is presently available for barter -- and to then determine the location of the items -- is a significant advantage of the present invention. Because buyers will typically be responsible for paying shipping costs, it is presumed that buyers will select the owner from which to acquire desired items from the search result listing based primarily on the location of the goods.

After receiving the barter authorization command, the item bank engine confirms to the buyer the quantity and location of items authorized for barter in step **4030**. The buyer is given the option to cancel or approve the barter transaction and, if approved, the item bank engine then verifies the buyer's account balance in step **4035** to insure that sufficient barter credits are in the buyer's account to cover the requested barter transaction. If there are insufficient barter credits in the buyer's account for the given barter transaction, then the item bank engine rejects the barter authorization by the buyer in step **4036** and notifies the buyer of the insufficient accounts balance in step **4037**. If the buyer has sufficient barter credits in its account to cover the requested barter transaction, then the item bank engine confirms the barter transaction to the buyer, including the item owner's identification (step **4040**) and sends confirmation of the barter transaction to the selected owner in step **4045**.

After confirming the barter transactions to the parties involved, the item bank engine debits the buyer's barter account (step **4050**) an amount equal to the quantity of the items bartered times their cost value, plus any associated transaction fee agreed to in advance between the buyer and the operator of the computerized barter system. The item bank engine credits the owner's barter account (step **4055**) an amount equal to the quantity of items bartered multiplied by their cost value, less any transaction fee agreed to between the owner

and the operator of the computerized barter system. Finally, the item bank engine removes the bartered items from the Item Bank Database 160 (step 4060) and recalculates the Cross Average Cost in the Item Bank Database for the named items bartered (step 4065).

As the discussion above illustrates, by requiring the use of a standardized item name  
5 for items in a particular industry and by organizing the standardized item names in a logical, industry-based multi-level organizational scheme, the present invention facilitates barter transactions between item owners and buyers in different geographic markets by allowing for owners to easily and efficiently input data on items available for barter into a centralized Item Bank Database and by allowing buyers to easily and efficiently search the Item Bank  
10 Database to determine whether specific items desired to be obtained are currently available. By allowing a system user to quickly and accurately determine whether or not a specific item desired is available for barter and to determine the location of items available, the present invention overcomes many of the disadvantages of existing barter exchanges, in which it is not possible to directly access this information without the assistance of a third party or  
15 “middle man” such as a barter exchange operator. Additionally, by calculating the Cross Average Cost of items in the Item Bank Database for a particular industry, allowing owners to accept the Cross Average Cost as the cost value of specific items, and using Cross Average Cost in determining a conversion rate between currency such as U.S. dollars and barter credits, the present invention provides a computerized barter economy in which the  
20 value of the barter credit is actually backed by the value of items available in the barter system. The value of the barter credit in this system is therefore void of traditional inflation costs such as lack of information by buyers, advertising and marketing influences, and other economic externalities affecting the value of currencies such as the U.S. dollar. Put simply, the present invention provides a new economic system.

While the present invention can be advantageously used by participants in a single industry, even greater advantages can be achieved when using the present invention in more than one industry, each industry having its own Item Bank Database and master list of standardized item names available in that industry. Because the Item Bank Databases of the different industries would be accessible to users in the other industry, utilizing the present invention for a plurality of industries would allow cross industry barter exchanges. Moreover, given the international accessibility of the Internet, the present invention may be advantageously utilized not only in multiple industries, but in multiple countries as well.

Particular advantage of the present invention may also be obtained by allowing existing barter exchanges to become users in the computerized barter system of the present invention. Such existing barter exchanges could establish a user account in the computerized barter system of the present invention by paying cash to the barter system operator, which would then be converted using the applicable conversion rate to barter credits for use in the present invention. Alternatively, existing barter exchanges could establish a user account in the computerized barter system of the present invention by providing trade credits usable in the existing barter exchange. In this case, the value of the barter dollars from the existing barter exchange would also be converted using the applicable conversion rates to barter credits for use in the present invention because the value of barter dollars in most existing barter exchanges is based more on the value of currency such as the U.S. dollar than on the actual goods in that barter exchange.

It will also be readily understood by those persons skilled in the art that the present invention is susceptible of being implemented on a wide variety of computer equipment and using a wide variety of programming languages. Unless otherwise specified above, the present invention is not limited to a particular software programming language or to particular logic circuits.

It will also be readily understood by those persons skilled in the art that the present invention is susceptible of broad utility and application. Many embodiments and adaptations of the present invention other than those specifically described herein, as well as many variations, modifications, and equivalent arrangements, will be apparent from or reasonably suggested by the present invention and the foregoing descriptions thereof, without departing from the substance or scope of the present invention. Accordingly, while the present invention has been described herein in detail in relation to its preferred embodiment, it is to be understood that this disclosure is only illustrative and exemplary at the present invention and is made merely for the purpose of providing a full and enabling disclosure of the invention. The foregoing disclosure is not intended to be construed to limit the present invention or otherwise exclude any such other embodiments, adaptations, variations, modifications or equivalent arrangements. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for the purpose of limitation.

## WHAT IS CLAIMED IS:

1. A method of conducting barter transactions between at least one owner of items available for barter in a predetermined industry and at least one buyer desiring to  
5 acquire items by barter comprising the steps of:

maintaining a database of items sold in the industry, each item being assigned a standardized item name;

establishing a barter credit account for the owner and for the buyer;

storing in the database the quantity, location, owner, and cost value data for each item  
10 available for barter in data fields associated with each respective standardized item name;

providing the quantity, location, and cost value data for a particular item in the database in response to a request from the buyer;

receiving a barter transaction authorization from the buyer for a predetermined quantity of particular items at a particular location; and

15 crediting the barter credit account of the owner and debiting the barter credit account of the buyer in an amount equal to the product of the cost value of the particular items bartered times the quantity of particular items bartered.

2. A method of conducting barter transactions as defined in Claim 1, further  
20 comprising the step of calculating a cross average cost value for each respective standardized item name in the database for which items are available for barter.

3. A method of conducting barter transactions as defined in Claim 2, further comprising the step of providing the cross average cost value for a particular item in the  
25 database in response to a request.

4. A method of conducting barter transactions as defined in Claim 1 wherein the standardized item names are organized in the database in a plurality of predetermined standardized minor categories, at least one standardized item name being included in each  
5 minor category and no standardized item name being contained in more than one minor category.

5. A method of conducting barter transactions as defined in Claim 4 wherein the standardized minor categories are organized in the database in a plurality of predetermined  
10 major categories, at least one standardized minor category being included in each major category and no minor category being contained in more than one major category.

6. A method of conducting barter transactions as defined in Claim 1, further comprising the step of storing current market new cost data in the database for a particular  
15 item available for barter in a data field associated with the particular standardized item name.

7. A method of conducting barter transactions as defined in Claim 6, further comprising the step of calculating a conversion rate between barter credits in the predetermined industry and an internationally recognized currency.

8. A method of conducting barter transactions as defined in Claim 1, further comprising the steps of receiving desired cost value data in the database for an item, storing  
in the database the desired cost value data for the item in a data field associated with each  
respective standardized item name, and providing the desired cost value data for a particular  
25 item in response to a request.

9. A method of conducting barter transactions as defined in Claim 8, further comprising the steps of calculating a demand average cost value for each respective standardized item name in the database for which desired cost value data is present in the database and providing the demand average cost value for a particular item in the database in response to a request.

10. A method of conducting barter transactions as defined in Claim 1, further comprising the step of providing to the buyer the owner data corresponding to particular items authorized for barter by the buyer after receiving the barter transaction authorization.

11. A method of conducting barter transactions as defined in Claim 1, further comprising the step of removing data from the database corresponding to items bartered.

12. A method of conducting barter transactions as defined in Claim 1 wherein a buyer computer and a computer network are used to transmit data between the database and the buyer and wherein an owner computer and a computer network are used to transmit data between the database and the owner.

13. A method of conducting barter transactions as defined in Claim 12 wherein the database is maintained on a central barter computer and quantity, location, owner and cost value data is received in the database from the owner computer in response to a command initiated by the central barter computer and transmitted to the owner computer over the computer network.

14. A method of conducting barter transactions as defined in Claim 12 wherein the computer network is a wide area network.

15. A method of conducting barter transactions as defined in Claim 12 wherein the computer network a virtual private network.

16. A method of conducting barter transactions as defined in Claim 12 wherein the computer network is the Internet.

17. A method of conducting barter transactions as defined in Claim 12 wherein the item, quantity, location, owner and cost value data is received by the central barter computer from the owner computer in an EDI format conventionally used in the predetermined industry, and comprising the additional step of transferring the received item, quantity, location and cost value data from the EDI format to the database.

18. A method of conducting barter transactions as defined in Claim 17 wherein the conventional EDI format used to transmit the item, quantity, location, owner and cost value is X12.

19. A method of conducting barter transactions as defined in Claim 17 wherein the conventional EDI format used to transmit the item, quantity, location, owner and cost value is XML.

20. A method of conducting barter transactions as defined in Claim 1 wherein the database includes a standardized item name for at least 90% of the items commonly sold in the predetermined industry.

5 21. A method of conducting barter transactions as defined in Claim 1, comprising the additional step of arranging shipment of the items bartered from their location to a location desired by the buyer.

10 22. A method of conducting barter transactions as defined in Claim 1, comprising the additional step of deducting a predetermined transaction fee from the barter credit account of the owner.

15 23. A method of conducting barter transactions as defined in Claim 1, comprising the additional step of deducting a predetermined transaction fee from the barter credit account of the buyer.

24. A method of facilitating barter transactions in a predetermined industry between at least one owner having items available for barter and at least one buyer desiring to acquire items by barter comprising the steps of:

20 maintaining a database of items sold in the industry, each item being assigned a standardized item name;

receiving quantity and location data for items available for barter from the owner;

storing the quantity, location and owner data in the database in data fields associated with each respective standardized item name;

25 receiving an availability request for a particular item in the database; and

providing the quantity and location data for the particular item in response to the availability request, whereby the buyer may determine the quantity and location of the particular item available for barter.

5           25.     A method of facilitating barter transactions in a predetermined industry as defined in Claim 24 wherein the standardized item names are organized in the database in a plurality of predetermined minor categories, at least one such standardized item name being included in each minor category and no standardized item name being contained in more than one minor category.

10           26.     A method of facilitating barter transactions in a selected industry as defined in Claim 25 wherein the standardized minor categories are organized in the database in a plurality of predetermined major categories, at least one standardized minor category being included in each major category and no minor category being included in more than one  
15     major category.

          27.     A method of facilitating barter transactions in a selected industry as defined in Claim 24, further comprising the steps of storing cost value data in the database for items that are available for barter and providing the cost value data for a particular item in the database  
20     in response to a request.

          28.     A method of facilitating barter transactions in a selected industry as defined in Claim 27, further comprising the step of calculating a cross average cost value for each respective standardized item name in the database for which items are available for barter  
25

29. A method of facilitating barter transactions in a selected industry as defined in Claim 28, further comprising the step of providing the cross average cost value for a particular item in the database in response to a request.

5 30. A method of facilitating barter transactions in a predetermined industry as defined in Claim 24, further comprising the step of providing to the buyer the owner data corresponding to particular items available for barter in the database in response to a request.

10 31. A method of facilitating barter transactions as defined in Claim 24, further comprising the step of storing current market new cost data into the database for a particular item that is available for barter in a data field associated with the particular standardized item name.

15 32. A method of facilitating barter transactions as defined in Claim 31, further comprising the step of calculating a conversion rate between barter credits in the predetermined industry and an internationally recognized currency.

20 33. A method of facilitating barter transactions as defined in Claim 24, further comprising the steps of receiving desired cost value data for an item into the database, storing in the database the desired cost value data for the item in a data field associated with each respective standardized item name, and providing the desired cost value data for a particular item in response to a request.

25 34. A method of conducting barter transactions as defined in Claim 33, further comprising the steps of calculating a demand average cost value for each respective

standardized item name in the database for which desired cost value data is present in the database and providing the demand average cost value for a particular item in response to a request.

5           35.     An apparatus for conducting computerized barter transactions between at least one owner having items available for barter and at least one buyer desiring to acquire items by barter, comprising:

              means for maintaining a database of items sold in the industry, each item being assigned a standardized item name;

10           means for establishing a barter credit account for the owner and for the buyer;

              means for storing in the database the quantity, location, owner and cost value data for each item available for barter in data fields associated with each respective standardized item name;

15           means for providing the quantity, location, owner and cost value data for a particular item in the database in response to a request from the buyer;

              means for receiving a barter transaction authorization from the buyer for a predetermined quantity of particular items at a particular location; and

20           means for crediting the barter credit account of the owner and debiting the barter credit account of the buyer in an amount equal to the product of the cost value of the particular items bartered times the quantity of particular items bartered.

              36.     An apparatus for conducting computerized barter transactions as defined in Claim 35, further comprising means for calculating a cross average cost value for each respective standardized item name in the database for which items are available for barter and

means for providing the cross average cost value for a particular item in the database in response to a request.

37. An apparatus for conducting computerized barter transactions as defined in  
5 Claim 35, further comprising means for storing current market new cost data in the database for a particular item available for barter in a data field associated with the particular standardized item name.

38. An apparatus for conducting computerized barter transactions as defined in  
10 Claim 37, further comprising means for calculating a conversion rate between barter credits in the predetermined industry and an internationally recognized currency.

39. An apparatus for conducting computerized barter transactions as defined in  
15 Claim 35, further comprising means for receiving desired cost value data in the database for an item, means for storing in the database the desired cost value data for the item in a data field associated with each respective standardized item name, and means for providing the desired cost value data for a particular item in response to a request.

40. An apparatus for conducting computerized barter transactions as defined in  
20 Claim 39, further comprising means for calculating a demand average cost value for each respective standardized item name in the database for which desired cost value data is present in the database and means for providing the demand average cost value for a particular item in the database in response to a request.

41. An apparatus for conducting computerized barter transactions as defined in Claim 35, further comprising means for receiving the quantity, location, owner and cost value data in an EDI format conventionally used in the predetermined industry and means for transferring the received item, quantity, location and cost value data from the EDI format to the database.

42. An apparatus for conducting computerized barter transactions comprising:  
at least one central barter computer comprising at least one processor that processes data and executes instructions, at least one data storage device that stores data, and at least one memory device that store instructions and other data;

a database of items sold in a predetermined industry stored in the at least one data storage device, each item being assigned a standardized item name in the database; and

said instructions in the at least one memory device causing the at least one processor to:

maintain a database of items sold in the industry, each item being assigned a standardized item name;

establish a barter credit account for the owner and for the buyer;

store in the database the quantity, location, owner and cost value data for each item available for barter in data fields associated with each respective standardized item name;

output the quantity, location, owner and cost value data for a particular item in the database in response to a query from the buyer;

receive a barter transaction authorization from the buyer for a predetermined quantity of particular items at a particular location; and

credit the barter credit account of the owner and debit the barter credit account of the buyer in an amount equal to the product of the cost value of the particular items bartered times the quantity of particular items bartered.

5           43.     An apparatus for conducting computerized barter transactions as defined in Claim 42, further comprising instructions in the at least one memory device causing the at least one processor to calculate a cross average cost value for each respective standardized item name in the database for which items are available for barter and output the cross average cost value for an item in the database in response to a database query.

10           44.     An apparatus for conducting computerized barter transactions as defined in Claim 42 wherein the standardized item names are organized in the database in a plurality of predetermined standardized minor categories, at least one standardized item name being included in each minor category and no standardized item name being contained in more than  
15     one minor category.

          45.     An apparatus for conducting computerized barter transactions as defined in Claim 44 wherein the standardized minor categories are organized in the database in a plurality of predetermined major categories, at least one standardized minor category being  
20     included in each such major category and no minor category being contained in more than one major category.

          46     An apparatus for conducting computerized barter transactions as defined in Claim 42, further comprising instructions in the at least one memory devices causing the at  
25     least one processor to receive current market new cost data into the database for a particular

item that is available for barter and to calculate a conversion rate between barter credits in the predetermined industry and an internationally recognized currency.

47. An apparatus for conducting computerized barter transactions as defined in Claim 42, further comprising instructions in the at least one memory devices causing the at least one processor to receive desired cost value data in the database for an item, store in the database the desired cost value data for the item in a data field associated with each respective standardized item name, and provide the desired cost value data for a particular item in response to a query.

48. An apparatus for conducting computerized barter transactions as defined in Claim 47, further comprising instructions in the at least one memory devices causing the at least one processor to calculate a demand average cost value for each respective standardized item name in the database for which desired cost value data is present in the database and outputting the demand average cost value for a particular item in the database in response to a database query.

49. An apparatus for conducting computerized barter transactions as defined in Claim 42 wherein the at least one central barter is accessible to a computer network and further comprising instructions in the at least one memory devices causing the at least one processor to initiate a command to a buyer computer that is also accessible to the computer network causing the buyer computer to transmit the quantity, location, owner and cost value data to the central barter computer.

50. An apparatus for conducting computerized barter transactions as defined in Claim 42, further comprising instructions in the at least one memory devices causing the at least one processor to receive item, quantity, location, owner and cost value data received in the database from an owner of items available for barter in an EDI format conventionally used in the industry and to transfer the item, quantity, location, owner and cost value data from the EDI format to the database.

51. A computer-readable medium for conducting barter transactions between at least one owner of items available for barter and at least one buyer desiring to acquire items by barter, the computer-readable medium having computer-executable instructions embodied thereon for performing the steps of:

maintaining a database of items sold in the industry, each item being assigned a standardized item name;

establishing a barter credit account for the owner and for the buyer;

storing in the database the quantity, location, owner and cost value data for each item available for barter in data fields associated with each respective standardized item name;

providing the quantity, location, and cost value data for a particular item in the database in response to a request from the buyer;

receiving a barter transaction authorization from the buyer for a predetermined quantity of particular items at a particular location; and

crediting the barter credit account of the owner and debiting the barter credit account of the buyer in an amount equal to the product of the cost value of the particular items bartered times the quantity of particular items bartered.

52. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the steps of calculating a cross average cost value for each respective standardized item name in the database for which items are available for barter and providing the cross average cost value for a particular item in the database in response to a request.

53. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the step of organizing the standardized item names in the database in a plurality of predetermined standardized minor categories, at least one standardized item name being included in each minor category and no standardized item name being contained in more than one minor category.

54. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the step of organizing the standardized minor categories in the database in a plurality of predetermined major categories, at least one standardized minor category being included in each major category and no minor category being contained in more than one major category.

55. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the step of storing current market new cost data in the database for a particular item available for barter in a data field associated with the particular standardized item name.

56. A computer-readable medium as defined in Claim 55 having further computer-executable instructions embodied thereon for performing the step of calculating a conversion

rate between barter credits in the predetermined industry and an internationally recognized currency.

57. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the steps of receiving desired cost value data in the database for an item, storing in the database the desired cost value data for the item in a data field associated with each respective standardized item name, and providing the desired cost value data for a particular item in response to a request.

58. A computer-readable medium as defined in Claim 57 having further computer-executable instructions embodied thereon for performing the step of calculating a demand average cost value for each respective standardized item name in the database for which desired cost value data is present in the database and providing the demand average cost value for a particular item in the database in response to a request.

59. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the step of providing to the buyer the owner data corresponding to particular items authorized for barter by the buyer after receiving the barter transaction authorization.

60. A computer-readable medium as defined in Claim 51 having further computer-executable instructions embodied thereon for performing the steps of receiving the item, quantity, location, owner and cost value data in an EDI format conventionally used in the predetermined industry, and comprising the additional step of transferring the received item, quantity, location and cost value data from the EDI format to the database.

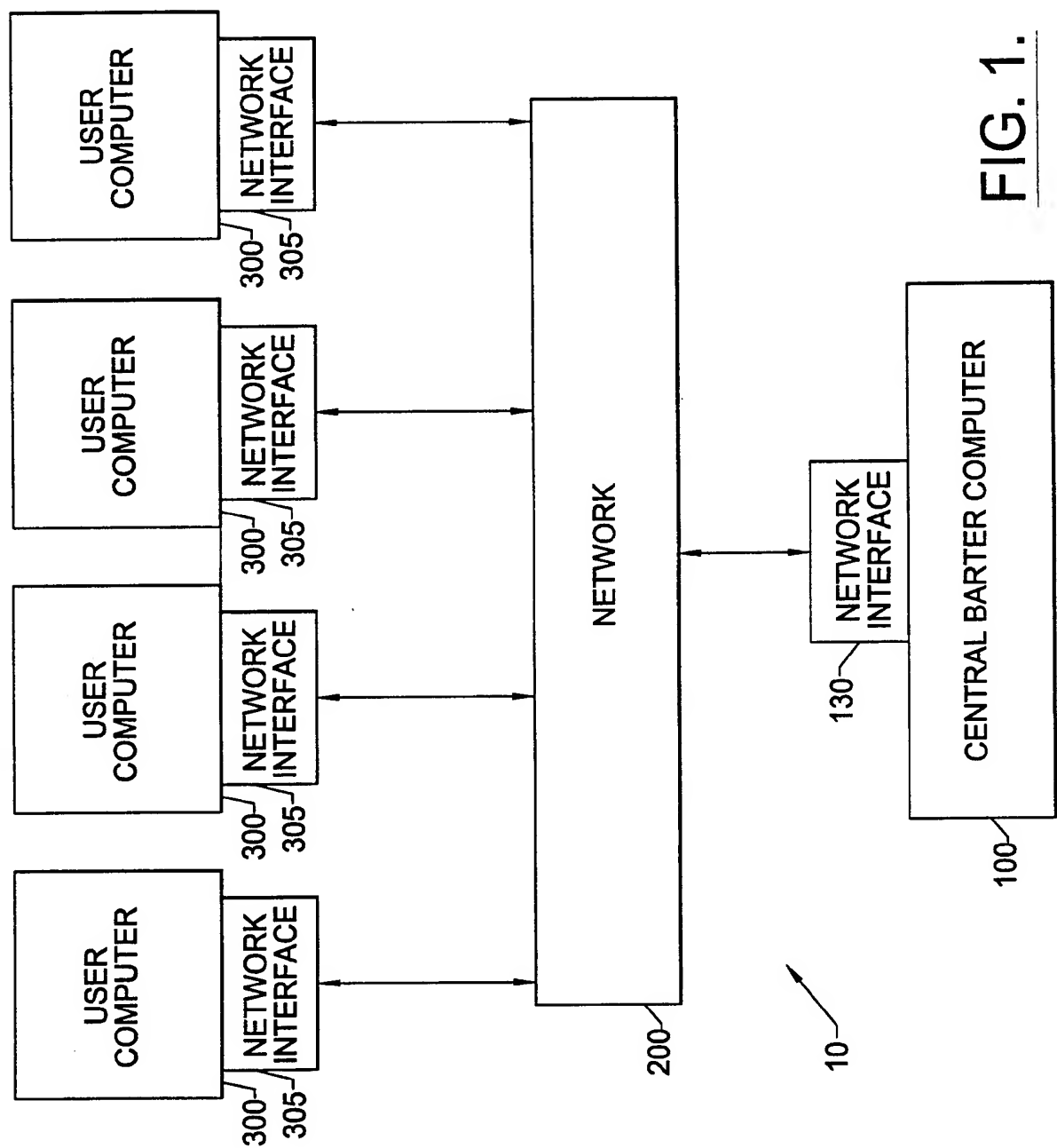
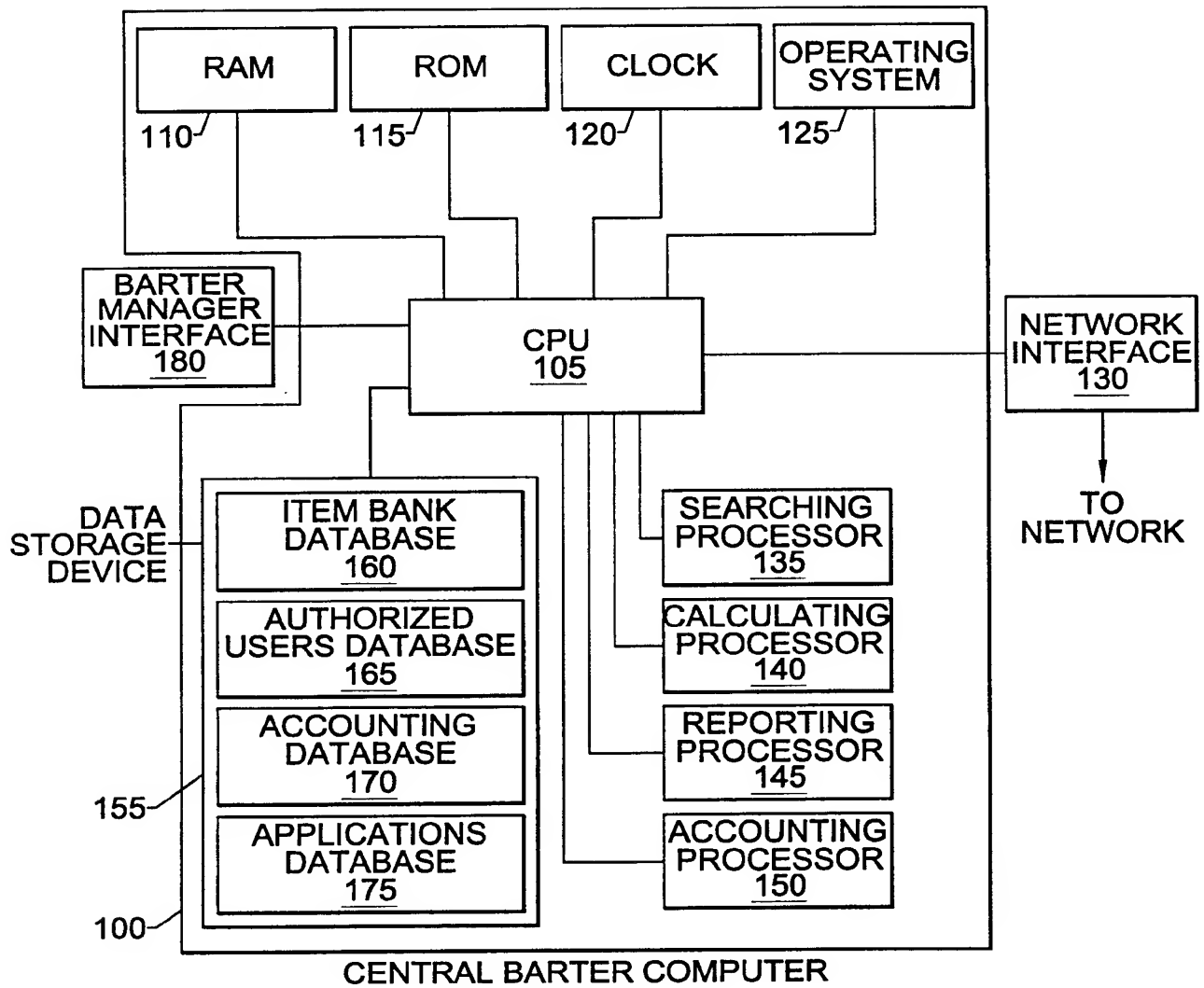
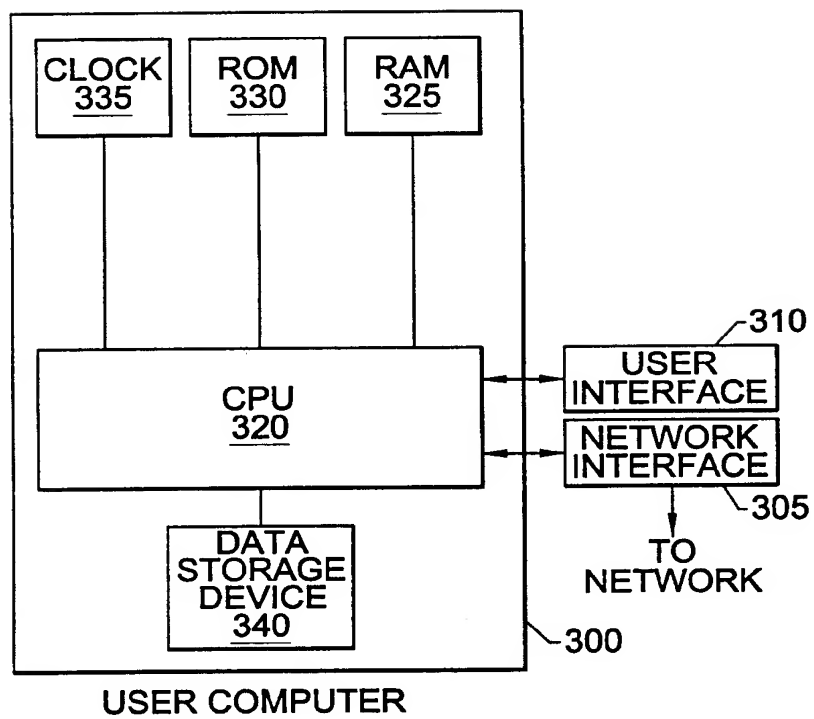


FIG. 1.

2/10

**FIG. 2.**

3/10

FIG. 3.

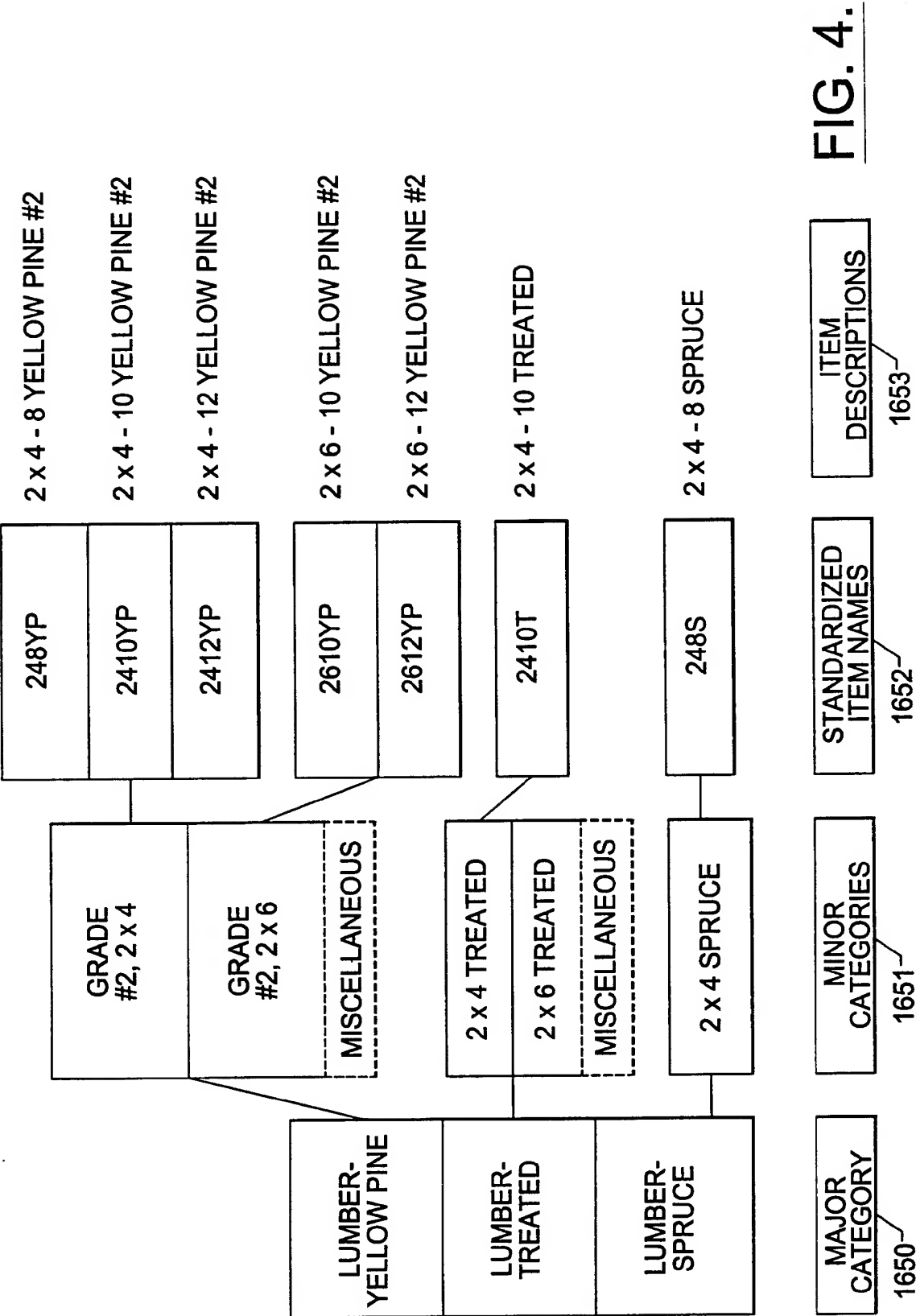


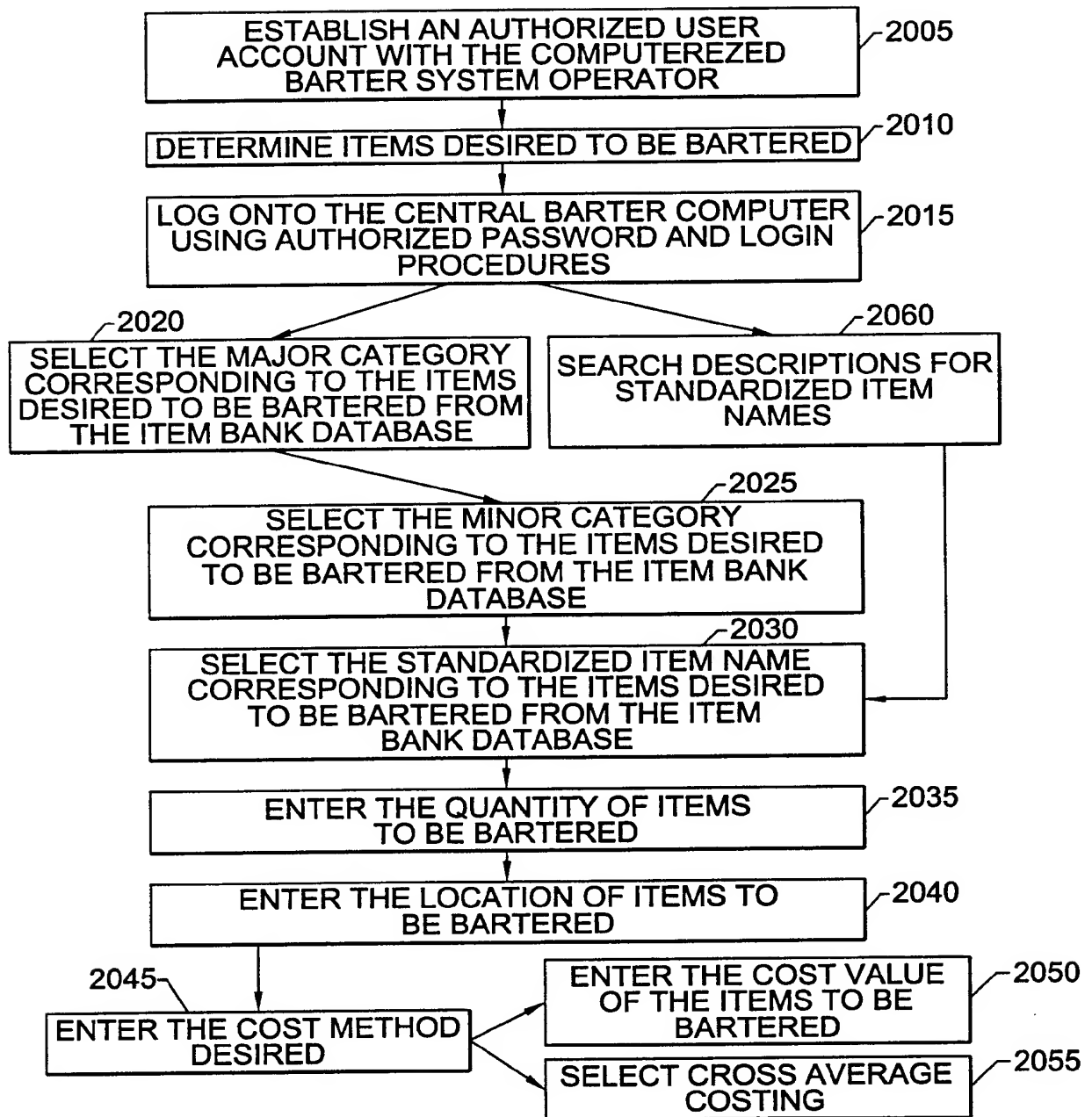
FIG. 4.

5/10

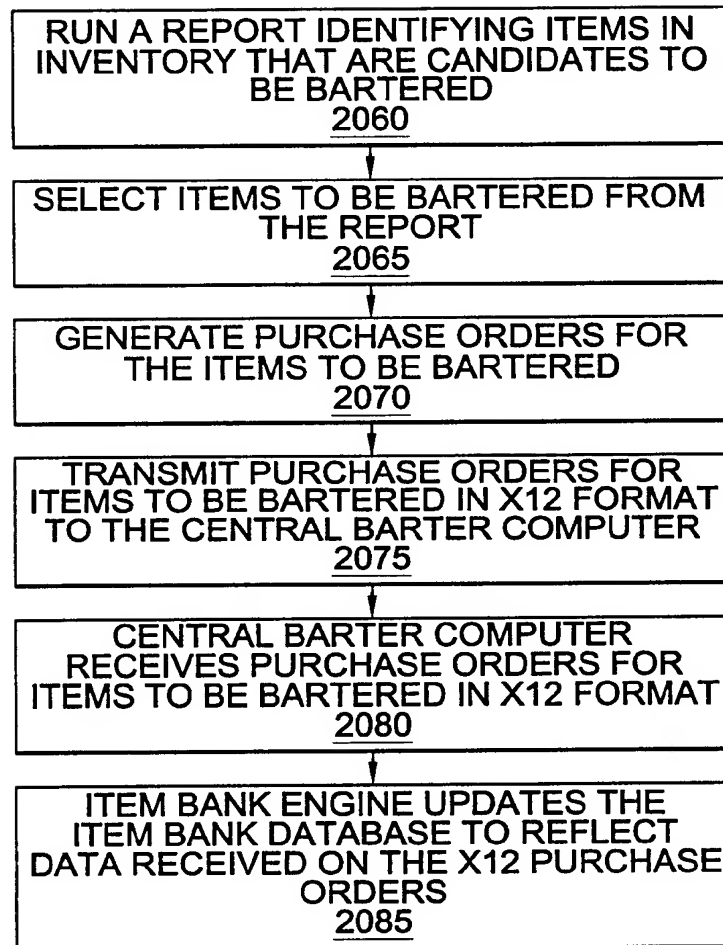
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COST VALUE <u>1603</u>
DESIRED COST VALUE <u>1611</u>
QUALITY <u>1604</u>
OWNER <u>1605</u>
CROSS AVERAGE COST <u>1606</u>
DEMAND AVERAGE COST <u>1607</u>
CURRENT MARKET NEW COST <u>1608</u>
IMAGE (OPTIONAL) <u>1609</u>

FIG. 5.

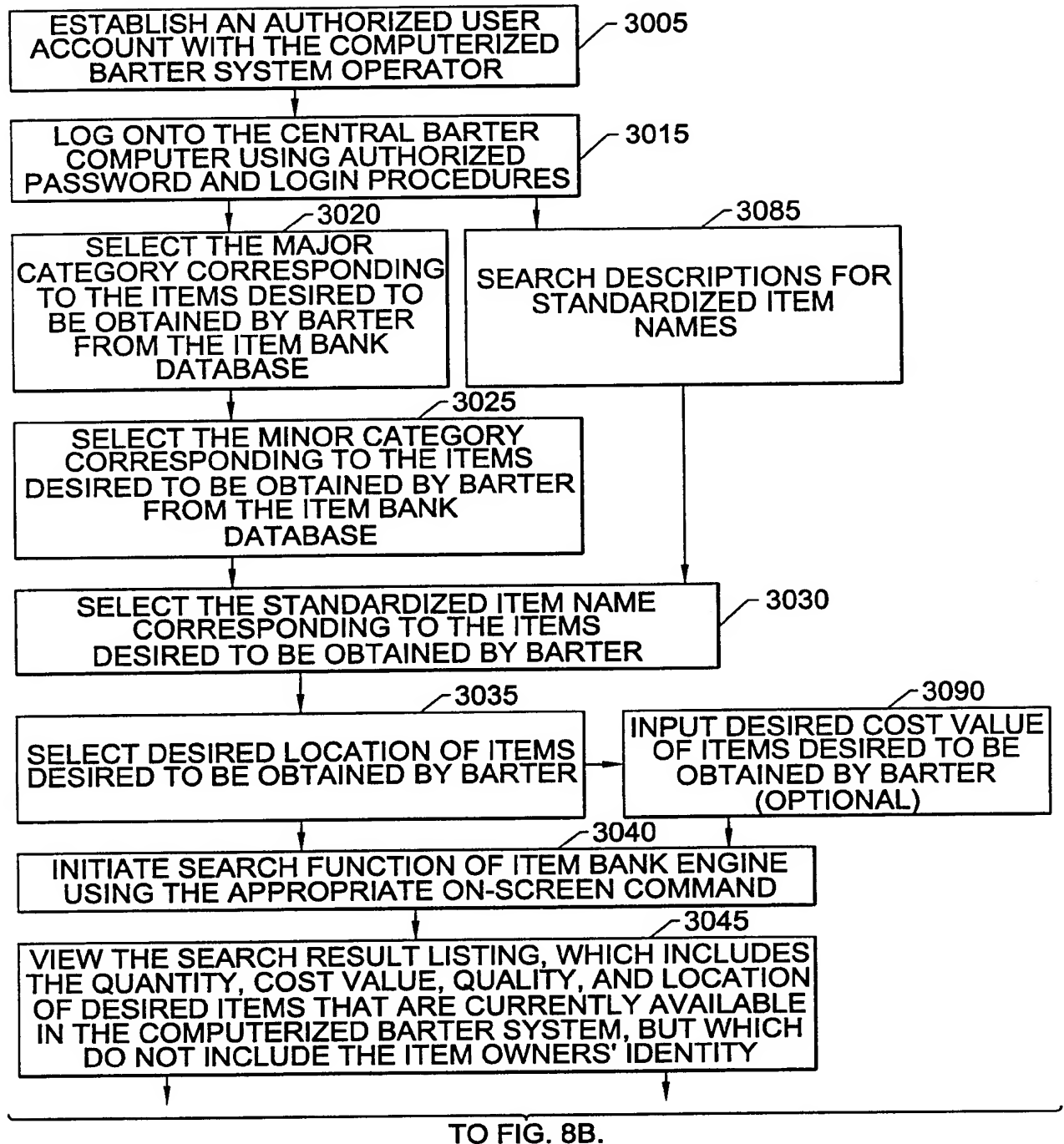
6/10

FIG. 6.

7/10

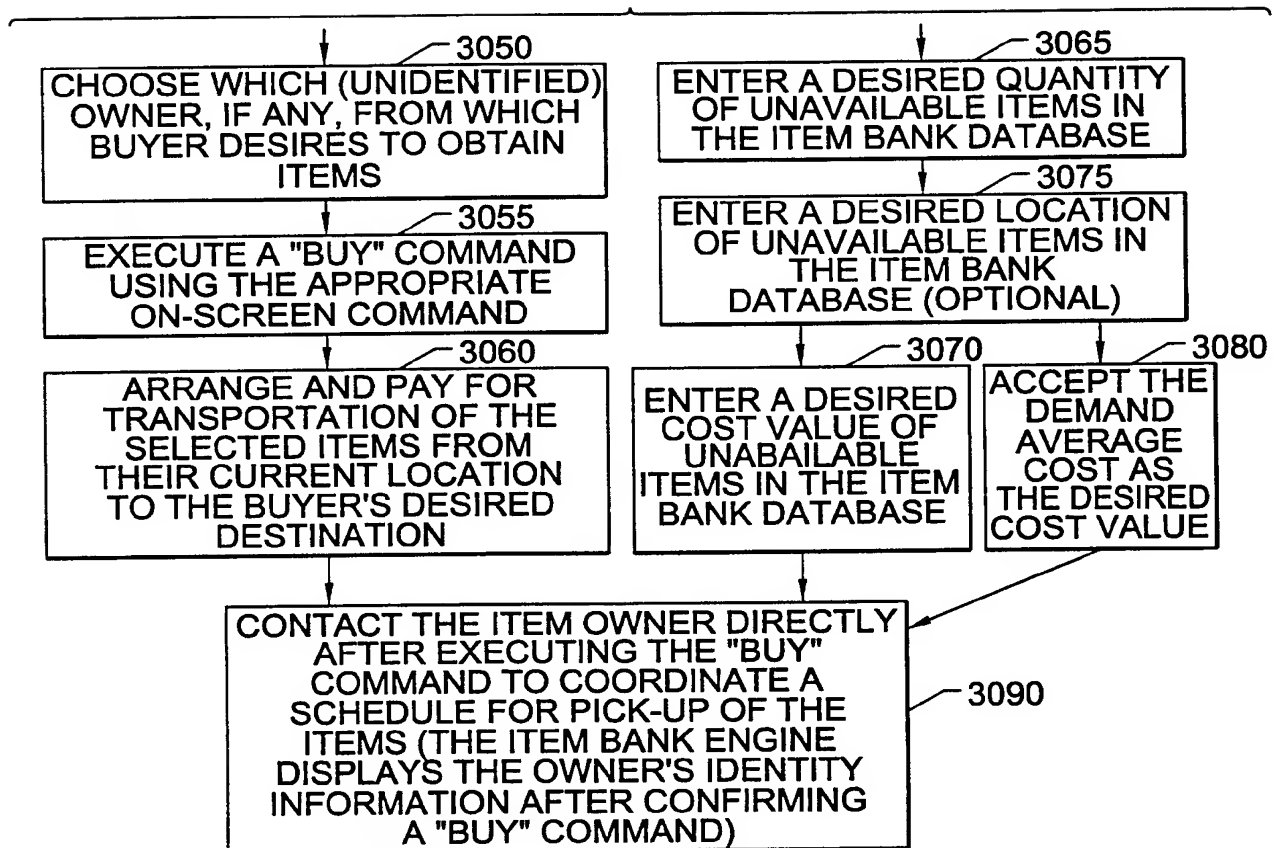
FIG. 7.

8/10

**FIG. 8A.**

9/10

FROM FIG. 8A.

FIG. 8B.

10/10

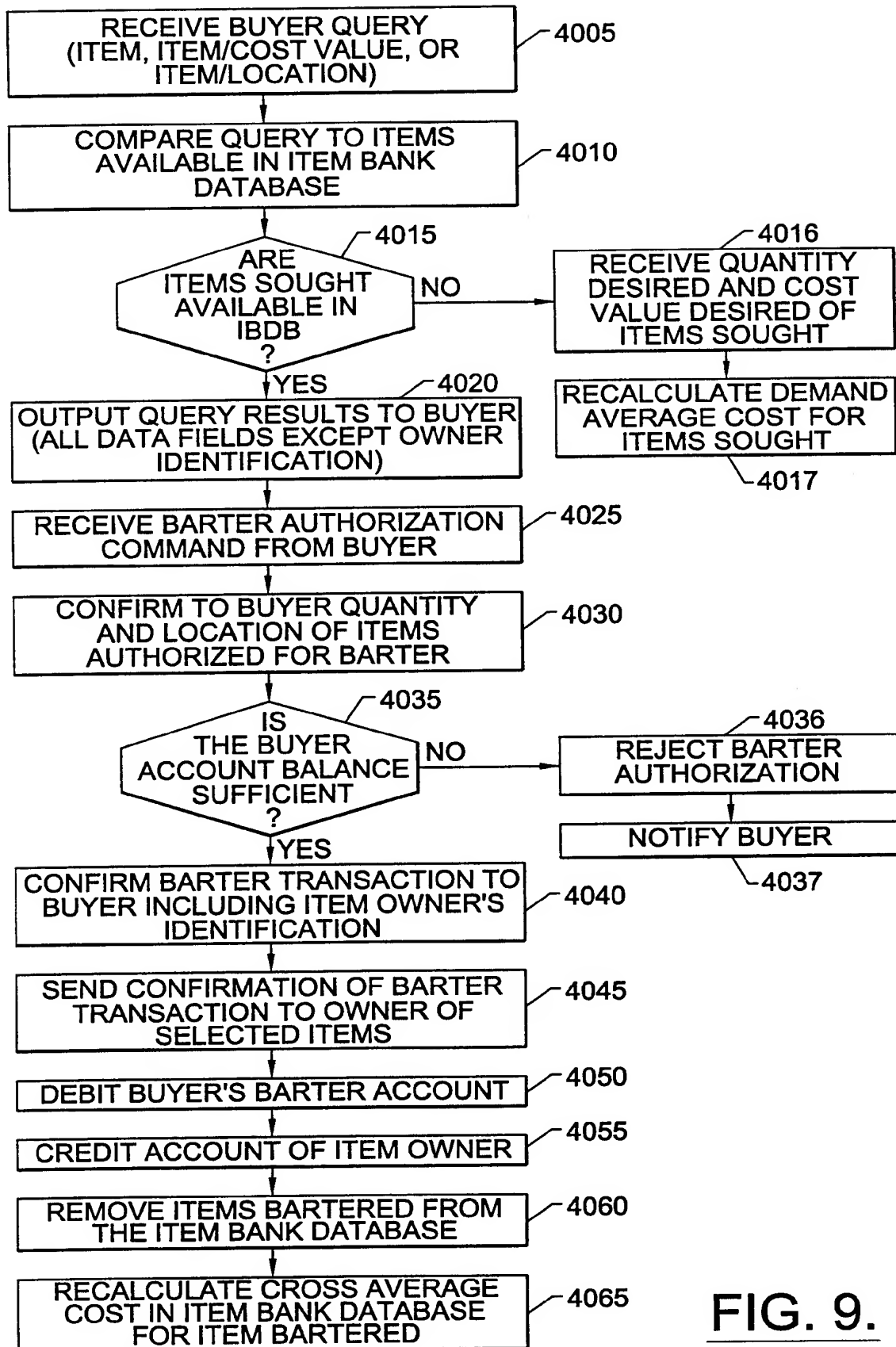


FIG. 9.